


~~RESTRICTED~~

IONOSPHERIC DATA

ISSUED
DECEMBER, 1944

PREPARED BY INTERSERVICE RADIO PROPAGATION LABORATORY
National Bureau of Standards
Washington, D.C.



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IONOSPHERIC DATA

Note.— This IRPL-F series report, issued monthly, serves as one of two current supplements to IRPL Radio Propagation Handbook, Part 1, (War Dept. TM11-499, Navy Dept. DNC-13-1). The supplements of the IRPL-D series, "Basic Radio Propagation Predictions Three Months in Advance," issued earlier in the month, include basic prediction charts, auxiliary charts and nomograms, as well as examples illustrative of their use.

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Provisional data (received by telephone or telegraph)

November, 1944

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TERMINOLOGY

Note.- The following symbols are used, conforming to the recommendations of the International Radio Propagation Conference held in Washington, D.C., 17 April to 5 May 1944.

- $f^{\circ}F2$ - ordinary-wave critical frequency for the F2 layer. The term night F layer will no longer be used. The term F2 layer is now used for the night F layer as well as the daytime F2 layer.
- $f^{\circ}F1$ - ordinary-wave critical frequency of the F1 layer.
- $f^{\circ}E$ - ordinary-wave critical frequency of the E layer.
- $h'F2$ - minimum virtual height of the F2 layer.
- $h'F1$ - minimum virtual height of the F1 layer.
- $h'E$ - minimum virtual height of the E layer.
- fEs - highest frequency of Es reflections.
- M - maximum usable frequency factor, to be followed by the distance in km.
Example: M3500 represents 3500-km maximum usable frequency factor.
- muf - maximum usable frequency.
- [] - interpolated value.
- () - doubtful value.

- A - characteristic not measurable because of blanketing by sporadic E.
- B - characteristic not measurable because of loss of trace due to absorption.
- C - characteristic not measurable because of equipment failure or interference.
- D - characteristic higher than upper limit of recorder.
- E - characteristic less than lower limit of recorder.
- F - spread echoes.
- G - $f^oF2 \leq f^oF1$.
- H - stratification observed within region.
- J - ordinary-wave critical frequency deduced from measured extraordinary-wave critical frequency.
- K - ionosphere storm in progress.

MONTHLY AVERAGES AND MEDIAN VALUES OF IONOSPHERIC DATA

The tables and graphs of ionospheric data presented here are assembled by the Interservice Radio Propagation Laboratory for analysis and correlation principally incidental to IRPL predictions of radio propagation conditions. These data are furnished by the following:

Carnegie Institution of Washington (Department of Terrestrial Magnetism)
 Baffin I., Canada
 Christmas I.
 Fairbanks, Alaska (University of Alaska, College, Alaska)
 Reykjavik, Iceland
 Maui, Hawaii
 Trinidad, Brit. West Indies
 Huancayo, Peru
 Watheroo, W. Australia

British National Physical Laboratory, and Inter-Services Ionosphere Bureau
 Radio Research Station, Slough, England
 Great Baddow, England
 Burghead, Scotland
 Delhi, India
 Madras, India
 Simonstown, Union of S. Africa

Australian Council for Scientific and Industrial Research
Radio Research Board, Australia
Brisbane, Q., Australia
Mt. Stromlo, Canberra, NSW, Australia

Canadian Department of National Defence, Naval Service
Churchill, Canada
Ottawa, Canada

New Zealand Radio Research Committee
Kermadec Is.
Christchurch (Canterbury University College Observatory)
Campbell Is.

Peoples' Commissar for Postal and Electric Communications, Moscow, U.S.S.R.
Tomsk, U.S.S.R.
Sverdlovsk, U.S.S.R.

National Bureau of Standards, Washington, D.C.
Stanford University, (San Francisco), California
Louisiana State University, Baton Rouge, Louisiana
University of Puerto Rico, San Juan, P.R.

For their timely value, some of the tables presented are provisional data received by telephone or telegraph in which there may be small or infrequent errors. When final values are available such errors will be corrected in later issues of this report.

The final values presented, both in tabular and graphical form, although correct for the quantities stated, as reported to this laboratory, may sometimes lead to an erroneous conception of typical values for the quantity under consideration. Standard scaling practice, following recommendations of the International Radio Propagation Conference held in Washington, D.C., 17 April to 5 May, 1944, is not yet universal, deviation from standard practice being most common in the cases of records where spread echoes are present. Even when standard scaling practice is used, intrinsically misleading results may arise from the monthly average being determined from only a few observations during the month. Two frequent types of such error, both particularly typical of stations in far northern or far southern latitudes are:

(a) Erroneously high values of monthly average critical frequencies caused by the frequent absence of record for cases where the critical frequency is below the lower frequency limit of the recorder. A median, rather than a mean, value of the critical frequency is more significant in such cases, the median being that for all times at which observations were made, the cases of such inability to read the records being counted as less than the lower frequency limit of the apparatus.

(b) Erroneously high values of monthly average F2-layer critical frequencies caused by the frequent occurrence of cases where the F1-layer critical frequency exceeds that of the F2-layer. This is characteristic of summer months during sunspot-cycle minimum, particularly in northern latitudes. In this case, also, median values are more significant than

mean values, the median being that for all cases where observations are made, those cases where missing values result because of higher f^oF1 being counted as less than the f^oF1 . When, as is often the case, no great discrepancy is likely to exist between f^oF1 and f^oF2 , a typical value of f^oF2 may be obtained by taking the monthly average of observed f^oF2 together with observed f^oF1 for the cases where no f^oF2 could be measured.

The discrepancy between predicted and observed values of monthly average critical frequencies, particularly for far northern stations, is frequently because of the above reasons, the predictions being intended to represent typical values for the location under consideration.

It may be noted by inspection of the figures presenting comparison of data received for the months of August, September, October, and November with IRPL predictions made four months in advance, that, generally, the predictions have been in error by being too low, especially in temperate latitudes.

These predictions are based on average trends of solar activity as measured by sunspot number. In the past few months this activity has been somewhat abnormally high. Occurrence of both sunspots and calcium flocculi during the past few months has been slightly more frequent at high than at low solar latitudes, indicating that perhaps the sunspot minimum has just been passed.

Because of great fluctuations in solar activity, however, an observation period of but a few months is so short as to render a final conclusion as to this premature as yet.

IONOSPHERIC DATA FOR EVERY DAY AND HOUR

These data, observed at Washington, D.C., follow the scaling practices recommended by the International Radio Propagation Conference held in Washington, D.C., 17 April to 5 May 1944. (Cf. IRPL-C61, pp.36-39).

Because of the high variability of observed fEs , mean values are of little practical significance and are not given here.

Mean values of other quantities are ordinarily given for all days of the month as well as for quiet days only. No periods of pronounced storminess having occurred during November, only one mean is given here. The criteria for selecting periods of ionospheric storminess, whose data are deleted in obtaining the mean values for quiet days only, are presented in IRPL-R5, "Criteria for Ionospheric Storminess", available to authorized persons upon request to the Chief of IRPL, National Bureau of Standards, Washington 25, D.C.

In determining the median values included in Tables 26 through 38, the following procedure has been adopted:

For all characteristics; Where the value is missing because of A, B, or C (see Terminology, above), that hour is omitted from the median count.

In addition,

For critical frequencies:

For all layers, where a value is missing because of E (see Terminology, above), it is counted as less than the lower limit of the recorder.

For virtual heights:

Values missing for any reason are omitted from the median count.

For muf factors:

Values missing for any reason are omitted from the median count.

IONOSPHERE DISTURBANCES

Table 39 presents ionospheric character figures observed at Washington, D.C., during November 1944, as determined by the criteria presented in IRPL-R5, cited above, together with American magnetic K-figures which are usually covariant with them. No major disturbances were noted at Washington, D.C., during November.

NOTE ON LONGITUDE EFFECT

Ionospheric data recently received from Madras, India (13.0°N , 80.2°E) and Christmas I. (2.0°N , 157.0°W), both located near the geomagnetic equator, at geomagnetic latitudes 3°N and 2°N , respectively, affords the possibility of comparison with data observed at Huancayo, Peru (12.0°S , 75.3°W), at geomagnetic latitude 0.6°S . The three stations are thus all near the geomagnetic equator, but with quite different geographic latitudes. This comparison is of particular interest in that the variation of ionospheric characteristics with geomagnetic latitude formed the basis of division of the world into the three zones (E, I, and W) recommended by the International Radio Propagation Conference held in Washington, D.C., 17 April to 5 May 1944, for coverage by prediction charts. This division was adopted 1 September 1944, in the first of the IRPL-D series reports, and $f^{\circ}\text{F}_2$ and F_2 -4000 muf charts have since been issued separately for the three zones. Madras, India, is located in the "E" zone, Christmas I. in the "I" zone, and Huancayo, Peru, in the "W" zone.

In order to augment the usefulness of actual data in the construction of F2-layer prediction charts, it has been heretofore assumed, in the absence of observed data from certain locations, that the diurnal variations of ionospheric characteristics are similar at places having equal geomagnetic latitudes and equal solar zenith angles or equivalent seasons. For example, after suitable corrections for the effect of changing solar activity and for "hemisphere effect" had been applied, data for a southern hemisphere W-zone station, for a time six months from that for which prediction is made, have been used at an equal north latitude in the E-zone.

Inspection of Figs. 20, 21, and 22 shows that a fair degree of similarity exists for the daytime values of f^oF_2 at Madras and Huancayo for times of approximately equal solar zenith angle at equivalent seasons. The beginning and end points on the Madras curves are considered less reliable than other points, and probably represent fewer observations. It may be noted, by comparing Huancayo observations for January and March, that night values of f^oF_2 may be conspicuously different for equal solar angles even at the same location.

Fig. 23 presents a mass plot of provisional data received telegraphically from Christmas I. for the first fifteen days of December, 1944, in comparison with August and April, 1944, and December, 1943, values of f^oF_2 for Huancayo, Peru. It may be noted that the Christmas I. data for December bear greatest similarity to data from Huancayo, Peru, for the same month (December), and not to the data from Huancayo for months of approximately equal solar zenith angle (April and August), although the curves for these bear some resemblance to each other.

Much further investigation is necessary before any but preliminary speculations concerning the cause of this effect can be made. It is interesting, however, to consider the possibility of its course in the seasonal variation of solar particle radiation arriving on earth. It was previously suggested in "Radio Propagation Conditions", issued August, 1944, p.4, that particle radiation may cause ionization at various levels in the atmosphere. The greater amount of particle radiation received during equinoctial seasons than during solstice seasons, as indicated by greater prevalence of ionospheric storminess during the equinox months, may perhaps explain qualitatively the fact that the night values of f^oF_2 at Huancayo during equinoctial periods are greater than those during the solstice seasons. Ionization at F-layer levels, rather than at the D- or E-layer levels characterizing storminess at higher latitudes might be expected from consideration of space variations in the earth's magnetic field. The comparative lack of difference between daytime values of f^oF_2 for equal solar zenith angles and equal geomagnetic latitudes may be explained by the particle ionization's appearing as increased fEs, rather than as ionization in the F layer (Cf. above reference). High midday values of fEs reported from Huancayo also lend some support to this suggestion.

ERRATA

1. In the second previous issue of this report, IRPL-F2, Table 29, presenting final data for August 1944, observed at Huancaayo, Peru, the value of f^oF_2 , 6.42 Mc, given for time 0600 should be that for time 0800.
2. In the previous issue of the report, IRPL-F3, the first paragraph, page 8, should be deleted. Missing values were omitted from the median count.

Table 1

Baffin Is., Canada (70.5°N, 66.6°W) November, 1944

| Time | h ¹ F2 | f ^o F2 | h ¹ F1 | f ^o F1 | h ¹ E | f ^o E | fEs | F2-M3000 |
|------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-----|----------|
| 00 | 271 | 2.66 | | | | | | 3.4 |
| 01 | 276 | 2.79 | | | | | | 3.3 |
| 02 | 289 | 2.83 | | | | | | 3.4 |
| 03 | 276 | 2.48 | | | | | | 3.5 |
| 04 | 292 | 2.86 | | | | | | 3.4 |
| 05 | 293 | 2.47 | | | | | | 3.4 |
| 06 | 278 | 2.65 | | | | | | 3.2 |
| 07 | 263 | 2.91 | | | | | | 3.2 |
| 08 | 257 | 3.46 | | | | | | 3.0 |
| 09 | 247 | 3.95 | | | | | | 3.1 |
| 10 | 241 | 4.27 | | | | | | 3.1 |
| 11 | 242 | 4.47 | | | | | | 3.1 |
| 12 | 241 | 4.47 | | | | | | 3.1 |
| 13 | 236 | 4.43 | | | | | | 3.2 |
| 14 | 248 | 4.41 | | | | | | 3.1 |
| 15 | 244 | 4.10 | | | | | | 3.1 |
| 16 | 247 | 3.94 | | | | | | 3.1 |
| 17 | 247 | 3.99 | | | | | | 3.1 |
| 18 | 260 | 3.75 | | | | | | 3.2 |
| 19 | 280 | 3.23 | | | | | | 3.3 |
| 20 | 262 | 2.92 | | | | | | 3.6 |
| 21 | 266 | 2.56 | | | | | | 3.6 |
| 22 | 266 | 2.56 | | | | | | 3.6 |
| 23 | 270 | 2.38 | | | | | | 3.6 |

Time: 75°W.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Table 3

Reykjavik, Iceland (64.1°N, 21.7°W) November, 1944

| Time | h ¹ F2 | f ^o F2 | h ¹ F1 | f ^o F1 | h ¹ E | f ^o E | fEs | F2-M3000 |
|------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-----|----------|
| 00 | 280 | 3.50 | | | | | | 3.1 |
| 01 | 280 | 3.40 | | | | | | 3.1 |
| 02 | 295 | 3.50 | | | | | | 2.8 |
| 03 | 300 | 3.20 | | | | | | 2.9 |
| 04 | | | | | | | | |
| 05 | 260 | 3.50 | | | | | | 3.3 |
| 06 | 260 | 3.25 | | | | | | 3.3 |
| 07 | | | | | | | | |
| 08 | 242 | 3.32 | | | | | | 3.4 |
| 09 | 242 | 3.74 | | | | | | 3.4 |
| 10 | 202 | 4.68 | | | | | | 3.4 |
| 11 | 208 | 5.18 | | | | | | 3.4 |
| 12 | 206 | 5.35 | | | 116 | 2.40 | | 3.5 |
| 13 | 214 | 5.58 | | | | | | 3.4 |
| 14 | 206 | 5.45 | | | | | | 3.5 |
| 15 | 202 | 4.87 | | | | | | 3.5 |
| 16 | 208 | 4.43 | | | | | | 3.2 |
| 17 | 229 | 3.92 | | | | | | 3.3 |
| 18 | 217 | 3.32 | | | | | | 3.3 |
| 19 | 227 | 3.27 | | | | | | 3.4 |
| 20 | 250 | 3.40 | | | | | | 3.5 |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |

Time: 15°W.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Table 2

Fairbanks, Alaska (64.9°N, 147.8°W) November, 1944

| Time | h ¹ F2 | f ^o F2 | h ¹ F1 | f ^o F1 | h ¹ E | f ^o E | fEs | F2-M3000 |
|------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-----|----------|
| 00 | 313 | 1.55 | | | | | | 3.00 |
| 01 | 331 | 1.63 | | | | | | 3.00 |
| 02 | 333 | 1.91 | | | | | | 3.00 |
| 03 | 328 | 2.01 | | | | | | 3.00 |
| 04 | 330 | 2.11 | | | | | | 2.99 |
| 05 | 312 | 2.14 | | | 103 | 1.20 | | 3.02 |
| 06 | 307 | 2.08 | | | 103 | 1.20 | | 3.05 |
| 07 | 283 | 2.12 | | | 103 | 1.15 | | 3.15 |
| 08 | 248 | 3.01 | | | 108 | 1.42 | | 3.25 |
| 09 | 231 | 4.16 | | | 103 | 1.43 | | 3.31 |
| 10 | 228 | 5.07 | | | 103 | 1.70 | | 3.38 |
| 11 | 232 | 6.55 | | | 103 | 1.84 | | 3.42 |
| 12 | 220 | 6.72 | | | 103 | 1.88 | | 3.46 |
| 13 | 218 | 5.84 | | | 103 | 1.77 | | 3.47 |
| 14 | 213 | 5.43 | | | 108 | 1.48 | | 3.48 |
| 15 | 211 | 4.55 | | | 108 | 1.06 | | 3.41 |
| 16 | 220 | 3.61 | | | 103 | 0.90 | | 3.34 |
| 17 | 229 | 2.62 | | | 103 | 0.90 | | 3.32 |
| 18 | 251 | 2.03 | | | 103 | 0.90 | | 3.31 |
| 19 | 256 | 1.63 | | | | | | 3.32 |
| 20 | 273 | 1.32 | | | | | | 3.24 |
| 21 | 289 | 1.33 | | | | | | 3.22 |
| 22 | 291 | 1.34 | | | | | | 3.20 |
| 23 | 287 | 1.45 | | | | | | 3.10 |

Time: 150°W.

Length of time sweep: 16 Mo to 0.5 Mo in fifteen minutes.

Table 4

Churchill, Canada (58.8°N, 94.2°W) November, 1944

| Time | h ¹ F2 | f ^o F2 | h ¹ F1 | f ^o F1 | h ¹ E | f ^o E | fEs | F2-M3000 |
|------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-----|----------|
| 00 | | | | | | | | |
| 01 | | | | | | | | |
| 02 | | | | | | | | |
| 03 | | | | | | | | |
| 04 | | | | | | | | |
| 05 | | | | | | | | |
| 06 | | 3.4 | | | | | | 3.1 |
| 07 | | | | | | | | |
| 08 | | 3.5 | | | | | | 3.3 |
| 09 | | 4.5 | | | | | | 3.4 |
| 10 | | 5.2 | | | | | | 3.3 |
| 11 | | 5.5 | | | | | | 3.2 |
| 12 | | 5.9 | | | | | | 3.2 |
| 13 | | 6.3 | | | | | | 3.3 |
| 14 | | 6.3 | | | | | | 3.3 |
| 15 | | 6.0 | | | | | | 3.3 |
| 16 | | 5.9 | | | | | | 3.3 |
| 17 | | 5.2 | | | | | | 3.2 |
| 18 | | 4.1 | | | | | | 3.2 |
| 19 | | 3.5 | | | | | | 3.1 |
| 20 | | 3.5 | | | | | | 3.1 |
| 21 | | 3.7 | | | | | | 3.1 |
| 22 | | 3.7 | | | | | | 3.1 |
| 23 | | | | | | | | |

Time: 90°W.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Table 5

Burghead, Scotland (57.7°N, 3.5°W)

November, 1944

| Time | h'P2 | f'P2 | h'F1 | f'F1 | h'E | f'E | F2-M3000 |
|------|------|------|------|------|-----|-----|----------|
| 00 | | 2.2 | | | | | |
| 01 | | 2.2 | | | | | |
| 02 | | 2.1 | | | | | |
| 03 | | 2.2 | | | | | |
| 04 | | 2.2 | | | | | |
| 05 | | 2.1 | | | | | |
| 06 | | 1.9 | | | | | |
| 07 | | 2.3 | | | | | |
| 08 | | 3.9 | | | | | |
| 09 | | 4.9 | | | | | |
| 10 | | 5.8 | | | | | |
| 11 | | 5.8 | | | | | |
| 12 | | 5.9 | | | | | |
| 13 | | 5.3 | | | | | |
| 14 | | 5.5 | | | | | |
| 15 | | 5.3 | | | | | |
| 16 | | 4.9 | | | | | |
| 17 | | 4.5 | | | | | |
| 18 | | 3.8 | | | | | |
| 19 | | 3.3 | | | | | |
| 20 | | 2.5 | | | | | |
| 21 | | 2.3 | | | | | |
| 22 | | 2.3 | | | | | |
| 23 | | 2.3 | | | | | |

Time: 00.

Table 6

Delhi, India (28.6°N, 77.2°E)

November, 1944

| Time | h'P2 | f'P2 | h'F1 | f'F1 | h'E | f'E | F2-M3000 |
|------|------|------|------|------|-----|-----|----------|
| 00 | | 2.9 | | | | | |
| 01 | | 2.7 | | | | | |
| 02 | | 2.9 | | | | | |
| 03 | | 2.7 | | | | | |
| 04 | | 2.7 | | | | | |
| 05 | | 2.7 | | | | | |
| 06 | | 3.4 | | | | | |
| 07 | | 5.6 | | | | | |
| 08 | | 6.6 | | | | | |
| 09 | | 7.2 | | | | | |
| 10 | | 7.8 | | | | | |
| 11 | | 7.9 | | | | | |
| 12 | | 8.3 | | | | | |
| 13 | | 9.1 | | | | | |
| 14 | | 9.4 | | | | | |
| 15 | | 8.2 | | | | | |
| 16 | | 7.4 | | | | | |
| 17 | | 6.4 | | | | | |
| 18 | | 4.7 | | | | | |
| 19 | | 4.0 | | | | | |
| 20 | | 3.5 | | | | | |
| 21 | | 3.1 | | | | | |
| 22 | | 2.9 | | | | | |
| 23 | | 2.9 | | | | | |

Time: 76°E.

Table 7

Maui, Hawaii (20.9°N, 156.5°W)

November, 1944

| Time | h'P2 | f'P2 | h'F1 | f'F1 | h'E | f'E | F2-M3000 |
|------|------|-------|------|------|-----|------|----------|
| 00 | 251 | 3.44 | | | | | 4.1 |
| 01 | 242 | 3.53 | | | | | 3.2 |
| 02 | 233 | 3.50 | | | | | 3.4 |
| 03 | 224 | 3.02 | | | | | 3.6 |
| 04 | 245 | 2.58 | | | | | 3.3 |
| 05 | 282 | 2.98 | | | | | 3.2 |
| 06 | 302 | 2.56 | | | | | 3.2 |
| 07 | 233 | 4.76 | | | | | 3.5 |
| 08 | 239 | 6.60 | 221 | 4.17 | 125 | 2.32 | 3.3 |
| 09 | 266 | 8.22 | 214 | 4.43 | 114 | 2.45 | 3.2 |
| 10 | 270 | 9.90 | 211 | 4.56 | 109 | 2.77 | 3.3 |
| 11 | 268 | 10.59 | 206 | 4.82 | 110 | 2.99 | 3.2 |
| 12 | 269 | 11.48 | 206 | 4.71 | 110 | 3.16 | 3.2 |
| 13 | 262 | 11.60 | 207 | 4.63 | 108 | 3.28 | 3.2 |
| 14 | 258 | 11.10 | 209 | 4.52 | 108 | 3.24 | 3.2 |
| 15 | 246 | 10.97 | 208 | 4.33 | 108 | 3.11 | 3.3 |
| 16 | 232 | 9.83 | 220 | 3.91 | 105 | 2.96 | 3.4 |
| 17 | 218 | 8.38 | | | 108 | 2.63 | 3.6 |
| 18 | 201 | 5.66 | | | 102 | 2.36 | 3.7 |
| 19 | 209 | 3.75 | | | | | 3.4 |
| 20 | 262 | 3.16 | | | | | 3.1 |
| 21 | 261 | 3.32 | | | | | 3.2 |
| 22 | 242 | 3.45 | | | | | 3.2 |
| 23 | 253 | 3.39 | | | | | 3.1 |

Time: 150°W.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Table 8

Trinidad, Brit. West Indies (10.6°N, 61.8°W)

November, 1944

| Time | h'P2 | f'P2 | h'F1 | f'F1 | h'E | f'E | F2-M3000 |
|------|------|------|------|------|-----|------|----------|
| 00 | 262 | 3.69 | | | | | 3.2 |
| 01 | 247 | 3.60 | | | | | 3.3 |
| 02 | 236 | 3.66 | | | | | 3.5 |
| 03 | 237 | 3.05 | | | | | 3.5 |
| 04 | 315 | 2.64 | | | | | 3.0 |
| 05 | 300 | 2.73 | | | | | 3.1 |
| 06 | 245 | 3.83 | | | | | 3.3 |
| 07 | 245 | 5.53 | | | | | 3.4 |
| 08 | 277 | 6.40 | 236 | 3.97 | 109 | 2.73 | 3.3 |
| 09 | 283 | 7.31 | 234 | 4.39 | 109 | 3.08 | 3.5 |
| 10 | 280 | 7.77 | 231 | 4.56 | 108 | 3.12 | 3.2 |
| 11 | 289 | 8.26 | 227 | 4.69 | 108 | 3.39 | 3.2 |
| 12 | 281 | 8.36 | 228 | 4.66 | 108 | 3.87 | 3.2 |
| 13 | 279 | 8.36 | 221 | 4.63 | 107 | 3.53 | 3.5 |
| 14 | 278 | 7.91 | 226 | 4.45 | 106 | 3.17 | 3.2 |
| 15 | 266 | 7.63 | 221 | 4.17 | 108 | 2.89 | 3.3 |
| 16 | 268 | 7.28 | 230 | 3.88 | 116 | 2.67 | 3.3 |
| 17 | 248 | 7.03 | 230 | 2.72 | 110 | 2.27 | 3.4 |
| 18 | 242 | 5.83 | | | | 1.80 | 3.3 |
| 19 | 239 | 4.65 | | | | | 3.3 |
| 20 | 257 | 3.34 | | | | | 3.3 |
| 21 | 322 | 3.13 | | | | | 2.9 |
| 22 | 296 | 3.37 | | | | | 3.0 |
| 23 | 260 | 3.34 | | | | | 3.1 |

Time: 60°W.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Table 9

Huancayo, Peru (12.0°S, 75.2°W) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | fEs | F2-M3000 |
|------|------|------|------|------|-----|-----|-----|----------|
| 00 | | 5.0 | | | | | | 2.7 |
| 01 | | 4.1 | | | | | | 3.2 |
| 02 | | 4.2 | | | | | | 3.3 |
| 03 | | 3.4 | | | | | | 3.2 |
| 04 | | 2.8 | | | | | | 3.8 |
| 05 | | 2.8 | | | | | | 3.2 |
| 06 | | 5.8 | | | | | | 3.8 |
| 07 | | 7.6 | | | | | | 3.2 |
| 08 | | 8.6 | | | | | | 3.0 |
| 09 | | 8.8 | | | | | | 2.7 |
| 10 | | 8.7 | | | | | | 2.7 |
| 11 | | 8.7 | | | | | | 2.6 |
| 12 | | 8.7 | | | | | | 2.6 |
| 13 | | 9.1 | | | | | | 2.6 |
| 14 | | 9.2 | | | | | | 2.6 |
| 15 | | 9.2 | | | | | | 2.6 |
| 16 | | 9.0 | | | | | | 2.7 |
| 17 | | 8.8 | | | | | | 2.7 |
| 18 | | 8.8 | | | | | | 2.8 |
| 19 | | 8.6 | | | | | | 2.8 |
| 20 | | 8.8 | | | | | | 2.9 |
| 21 | | 7.7 | | | | | | 2.9 |
| 22 | | 6.8 | | | | | | 2.8 |
| 23 | | 6.0 | | | | | | 2.6 |

Time: 75°W.

Length of time sweep: 16 Ms to 0.5 Ms in fifteen minutes.

Table 10

Brisbane, Q., Australia (27.6°S, 153.0°E) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | fEs | F2-M3000 |
|------|------|------|------|------|-----|-----|-----|----------|
| 00 | | 5.7 | | | | | | 3.1 |
| 01 | | 5.6 | | | | | | 3.8 |
| 02 | | 5.0 | | | | | | 3.4 |
| 03 | | 4.2 | | | | | | 3.3 |
| 04 | | 3.7 | | | | | | 3.2 |
| 05 | | 4.0 | | | | | | 3.5 |
| 06 | | 4.9 | | | | | | 3.6 |
| 07 | | 5.6 | | | | | | 3.8 |
| 08 | | 6.1 | | | | | | 3.2 |
| 09 | | 6.6 | | | | | | 3.2 |
| 10 | | 7.2 | | | | | | 3.1 |
| 11 | | 8.0 | | | | | | 3.1 |
| 12 | | 8.3 | | | | | | 3.1 |
| 13 | | 8.8 | | | | | | 3.1 |
| 14 | | 8.2 | | | | | | 3.2 |
| 15 | | 8.0 | | | | | | 3.8 |
| 16 | | 7.8 | | | | | | 3.8 |
| 17 | | 7.6 | | | | | | 3.8 |
| 18 | | 7.2 | | | | | | 3.8 |
| 19 | | 6.6 | | | | | | 3.1 |
| 20 | | 6.2 | | | | | | 3.0 |
| 21 | | 6.0 | | | | | | 3.0 |
| 22 | | 5.9 | | | | | | 3.0 |
| 23 | | 5.9 | | | | | | 3.0 |

Time: 150°E.

Length of time sweep: 2.2 Ms to 12.5 Ms in two minutes, thirty seconds.

Table 11

Simonstown, Union of S. Africa (33.6°S, 18.7°E) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | fEs | F2-M3000 |
|------|------|------|------|------|-----|-----|-----|----------|
| 00 | | 3.8 | | | | | | 2.8 |
| 01 | | 3.9 | | | | | | 3.0 |
| 02 | | 3.8 | | | | | | 3.0 |
| 03 | | 3.7 | | | | | | 3.0 |
| 04 | | 3.7 | | | | | | 3.1 |
| 05 | | 3.8 | | | | | | 3.1 |
| 06 | | 4.7 | | | | | | 3.1 |
| 07 | | 5.6 | | | | | | 3.0 |
| 08 | | 6.4 | | | | | | 3.1 |
| 09 | | 6.8 | | | | | | 3.0 |
| 10 | | 7.3 | | | | | | 2.8 |
| 11 | | 7.7 | | | | | | 2.9 |
| 12 | | 8.6 | | | | | | 3.0 |
| 13 | | 9.0 | | | | | | 3.0 |
| 14 | | 8.9 | | | | | | 3.0 |
| 15 | | 8.7 | | | | | | 3.0 |
| 16 | | 8.8 | | | | | | 3.0 |
| 17 | | 7.8 | | | | | | 3.1 |
| 18 | | 7.7 | | | | | | 3.1 |
| 19 | | 7.0 | | | | | | 3.2 |
| 20 | | 6.2 | | | | | | 3.1 |
| 21 | | 5.2 | | | | | | 3.2 |
| 22 | | 4.0 | | | | | | 3.0 |
| 23 | | 4.0 | | | | | | 3.0 |

Time: 15°E.

Length of time sweep: 2 Ms to 16 Ms in one minute.

Table 12

Mt. Stromlo, N.S.W., Australia (35.3°S, 149.0°E) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | fEs | F2-M3000 |
|------|------|------|------|------|-----|-----|-----|----------|
| 00 | | 4.9 | | | | | | 2.9 |
| 01 | | 4.7 | | | | | | 3.1 |
| 02 | | 4.8 | | | | | | 3.2 |
| 03 | | 3.7 | | | | | | 3.1 |
| 04 | | 3.4 | | | | | | 3.0 |
| 05 | | 3.7 | | | | | | 3.2 |
| 06 | | 4.5 | | | | | | 3.2 |
| 07 | | 5.1 | | | | | | 3.1 |
| 08 | | 5.6 | | | | | | 3.1 |
| 09 | | 6.0 | | | | | | 3.0 |
| 10 | | 6.8 | | | | | | 3.0 |
| 11 | | 6.7 | | | | | | 3.1 |
| 12 | | 6.6 | | | | | | 3.0 |
| 13 | | 6.6 | | | | | | 3.0 |
| 14 | | 6.7 | | | | | | 3.1 |
| 15 | | 6.6 | | | | | | 3.1 |
| 16 | | 6.5 | | | | | | 3.1 |
| 17 | | 6.8 | | | | | | 3.2 |
| 18 | | 6.2 | | | | | | 3.2 |
| 19 | | 6.0 | | | | | | 3.1 |
| 20 | | 5.7 | | | | | | 3.1 |
| 21 | | 5.2 | | | | | | 3.0 |
| 22 | | 5.0 | | | | | | 3.0 |
| 23 | | 4.9 | | | | | | 2.9 |

Time: 150°E.

Length of time sweep: 1.6 Ms to 12.6 Ms in two minutes.

Table 13

Christchurch, N.Z. (43.5°S, 172.6°E) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | F2-M3000 |
|------|------|------|------|------|-----|------|----------|
| 00 | 283 | 5.18 | | | | | |
| 01 | 283 | 4.73 | | | | | |
| 02 | 283 | 4.28 | | | | | |
| 03 | 285 | 3.83 | | | | | |
| 04 | 246 | 3.52 | | | | | |
| 05 | 244 | 4.10 | 234 | 2.91 | 108 | 2.67 | |
| 06 | 249 | 4.71 | 235 | 4.01 | 100 | 2.74 | |
| 07 | 312 | 5.31 | 235 | 4.23 | 99 | 2.51 | |
| 08 | 325 | 5.76 | 238 | 4.37 | 99 | 3.09 | |
| 09 | 381 | 6.12 | 226 | 4.42 | 100 | 3.20 | |
| 10 | 308 | 6.20 | 228 | 4.49 | 100 | 3.18 | |
| 11 | 304 | 6.27 | 202 | 4.45 | 98 | 3.20 | |
| 12 | 300 | 6.41 | 206 | 4.50 | 101 | 3.20 | |
| 13 | 322 | 6.50 | 211 | 4.44 | 100 | 3.07 | |
| 14 | 344 | 6.07 | 216 | 4.32 | 100 | 2.69 | |
| 15 | 322 | 6.24 | 229 | 4.08 | 102 | 2.61 | |
| 16 | 303 | 6.35 | 232 | 3.76 | 104 | 2.07 | |
| 17 | 288 | 6.46 | 240 | 3.21 | | | |
| 18 | 261 | 6.61 | 244 | | | | |
| 19 | 251 | 7.04 | | | | | |
| 20 | 223 | 6.93 | | | | | |
| 21 | 245 | 6.20 | | | | | |
| 22 | 252 | 5.88 | | | | | |
| 23 | 246 | 5.54 | | | | | |

Time: 172.50°.

Length of time sweep: 2.5 Mo to 12 Mo in two minutes.

Table 15

Washington, D.C. (39.0°N, 77.6°W) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | F2-M3000 |
|------|------|------|------|------|-----|------|----------|
| 00 | 278 | 2.50 | | | | | 3.0 |
| 01 | 271 | 2.57 | | | | | 3.0 |
| 02 | 264 | 2.81 | | | | | 2.9 |
| 03 | 254 | 2.97 | | | | | 2.7 |
| 04 | 248 | 3.07 | | | | | 3.0 |
| 05 | 240 | 3.00 | | | | | 2.9 |
| 06 | 240 | 2.81 | | | | | 3.3 |
| 07 | 228 | 4.10 | 206 | 3.50 | 120 | 2.07 | 3.4 |
| 08 | 232 | 5.64 | 209 | 3.78 | 116 | 2.43 | 3.7 |
| 09 | 237 | 6.10 | 208 | 3.97 | 116 | 2.78 | 3.4 |
| 10 | 246 | 6.30 | 208 | 4.04 | 112 | 2.93 | 3.5 |
| 11 | 251 | 6.48 | 213 | 4.04 | 112 | 3.00 | 3.4 |
| 12 | 256 | 6.63 | 216 | 3.97 | 116 | 2.86 | 3.3 |
| 13 | 268 | 6.77 | 224 | 3.76 | 116 | 2.77 | 3.5 |
| 14 | 253 | 6.79 | 224 | 3.50 | 114 | 2.47 | 3.4 |
| 15 | 242 | 6.66 | 226 | | 117 | 1.99 | 3.2 |
| 16 | 228 | 6.38 | | | 110 | | 3.1 |
| 17 | 216 | 5.51 | | | | | 3.0 |
| 18 | 223 | 3.86 | | | | | 2.9 |
| 19 | 238 | 3.30 | | | | | 3.1 |
| 20 | 248 | 2.78 | | | | | 3.2 |
| 21 | 266 | 2.48 | | | | | 2.3 |
| 22 | 275 | 2.37 | | | | | 3.0 |
| 23 | 280 | 2.40 | | | | | 2.4 |

Time: 75°W.

Length of time sweep: 0.8 Mo to 14.0 Mo in two minutes.

Table 14

Ottawa, Canada (45.5°N, 75.8°W) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | F2-M3000 |
|------|------|------|------|------|-----|-----|----------|
| 00 | 362 | 2.7 | | | | | 2.8 |
| 01 | 368 | 2.6 | | | | | 3.0 |
| 02 | 348 | 2.7 | | | | | 2.9 |
| 03 | 343 | 2.7 | | | | | 2.9 |
| 04 | 321 | 2.8 | | | | | 3.0 |
| 05 | 316 | 2.4 | | | | | 2.9 |
| 06 | 308 | 3.0 | 226 | 3.1 | 122 | 2.5 | 3.0 |
| 07 | 244 | 4.2 | 222 | 3.2 | 130 | 2.4 | 3.3 |
| 08 | 235 | 5.4 | 210 | 3.5 | 137 | 2.6 | 3.4 |
| 09 | 243 | 5.9 | 208 | 3.8 | 122 | 2.7 | 4.1 |
| 10 | 249 | 6.3 | 210 | 3.9 | 121 | 2.8 | 3.4 |
| 11 | 254 | 6.7 | 210 | 3.9 | 121 | 2.8 | 4.5 |
| 12 | 257 | 6.9 | 210 | 3.9 | 121 | 2.8 | 4.5 |
| 13 | 256 | 6.8 | 219 | 3.8 | 120 | 2.9 | 4.4 |
| 14 | 251 | 6.7 | 224 | 3.5 | 130 | 2.5 | 4.0 |
| 15 | 238 | 6.6 | 231 | 3.2 | 134 | 3.4 | 3.7 |
| 16 | 227 | 6.0 | 226 | 3.4 | 116 | 2.3 | 3.6 |
| 17 | 231 | 5.0 | 230 | 3.1 | | | 2.7 |
| 18 | 242 | 4.5 | | | | | 3.3 |
| 19 | 258 | 3.5 | | | | | 3.2 |
| 20 | 278 | 3.0 | | | | | 2.5 |
| 21 | 318 | 2.8 | | | | | 3.1 |
| 22 | 352 | 2.7 | | | | | 2.4 |
| 23 | 349 | 2.7 | | | | | 2.5 |

Time: 75°W.

Length of time sweep: 1.93 Mo to 13.5 Mo. Manual operation.

Table 16

San Francisco, Calif. (37.4°N, 122.2°W) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | F2-M3000 |
|------|------|------|------|------|-----|------|----------|
| 00 | 261 | 3.16 | | | | | 2.7 |
| 01 | 252 | 3.26 | | | | | 2.7 |
| 02 | 251 | 3.20 | | | | | 2.5 |
| 03 | 256 | 3.26 | | | | | 3.1 |
| 04 | 251 | 3.26 | | | | | 3.1 |
| 05 | 248 | 3.20 | | | | | 3.1 |
| 06 | 250 | 3.19 | | | | | 3.1 |
| 07 | 230 | 4.75 | | | | 1.75 | 3.4 |
| 08 | 233 | 6.56 | 215 | 3.18 | 112 | 2.28 | 2.9 |
| 09 | 235 | 6.96 | 212 | 3.73 | 110 | 2.61 | 3.3 |
| 10 | 250 | 7.25 | 214 | 4.01 | 108 | 2.89 | 3.4 |
| 11 | 246 | 7.22 | 220 | 4.10 | 108 | 3.03 | 3.4 |
| 12 | 253 | 7.37 | 213 | 4.14 | 107 | 3.09 | 3.4 |
| 13 | 256 | 7.40 | 220 | 4.10 | 108 | 3.01 | 3.4 |
| 14 | 249 | 7.28 | 234 | 3.97 | 108 | 2.85 | 3.4 |
| 15 | 240 | 7.01 | 232 | 3.62 | 106 | 2.65 | 3.5 |
| 16 | 228 | 6.48 | | | 111 | 2.09 | 2.2 |
| 17 | 207 | 4.93 | | | | 2.3 | 3.4 |
| 18 | 216 | 2.99 | | | | | 3.3 |
| 19 | 248 | 2.75 | | | | | 3.2 |
| 20 | 236 | 2.78 | | | | | 3.3 |
| 21 | 252 | 2.65 | | | | | 2.6 |
| 22 | 254 | 2.96 | | | | | 2.4 |
| 23 | 256 | 3.09 | | | | | 2.6 |

Time: 120°W.

Length of time sweep: 0.8 Mo to 12 Mo in six minutes. Record centered on the hour.

Table 17

Baton Rouge, Louisiana (30.5°N, 91.2°W) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | F2-M3000 |
|------|------|------|------|------|-----|------|----------|
| 00 | 297 | 5.46 | | | | | 3.0 |
| 01 | 288 | 5.63 | | | | | 3.0 |
| 02 | 290 | 5.81 | | | | | 3.0 |
| 03 | 278 | 5.96 | | | | | 3.1 |
| 04 | 266 | 5.82 | | | | | 3.2 |
| 05 | 278 | 5.44 | | | | | 3.0 |
| 06 | 277 | 5.50 | | | | | 3.1 |
| 07 | 268 | 5.47 | | | 140 | 2.0 | 3.3 |
| 08 | 269 | 6.28 | 248 | 3.55 | 133 | 2.29 | 3.3 |
| 09 | 284 | 6.98 | 244 | 3.70 | 124 | 2.76 | 3.2 |
| 10 | 289 | 7.06 | 242 | 4.81 | 120 | 2.98 | 3.2 |
| 11 | 288 | 7.30 | 243 | 4.45 | 120 | 3.15 | 3.2 |
| 12 | 298 | 7.43 | 244 | 4.46 | 118 | 3.17 | 3.1 |
| 13 | 292 | 7.86 | 248 | 4.46 | 119 | 3.15 | 3.1 |
| 14 | 280 | 7.80 | 253 | 4.82 | 120 | 2.98 | 3.2 |
| 15 | 274 | 7.24 | 250 | 3.65 | 128 | 2.68 | 3.2 |
| 16 | 260 | 6.60 | 249 | 3.28 | 136 | 2.19 | 3.3 |
| 17 | 240 | 5.58 | | | | | 3.4 |
| 18 | 239 | 4.11 | | | | | 3.4 |
| 19 | 288 | 2.86 | | | | | 3.0 |
| 20 | 286 | 3.04 | | | | | 3.0 |
| 21 | 291 | 3.10 | | | | | 3.0 |
| 22 | 293 | 3.27 | | | | | 3.0 |
| 23 | 289 | 3.41 | | | | | 3.0 |

Time: 90°W.

Length of time sweep: 1.8 Ms to 9.8 Ms in three minutes, thirty seconds.
Record centered on the hour.

Table 19

(Corrections and additions to previously issued provisional data)

Trinidad, British West Indies (10.6°N, 61.3°W) October, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | F2-M3000 |
|------|------|------|------|------|-----|-----|----------|
| 00 | | | | | | | |
| 01 | | | | | | | |
| 02 | | | | | | | |
| 03 | | | | | | | |
| 04 | | | | | | | |
| 05 | | | | | | | |
| 06 | | | | | | | |
| 07 | | | | | 117 | | |
| 08 | | | | 4.28 | | | |
| 09 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | 4.0 | |
| 15 | | | | | | 4.8 | |
| 16 | | | | | | 4.6 | |
| 17 | | | | | | 4.1 | |
| 18 | | | | | | 3.8 | |
| 19 | | | | | | 3.4 | |
| 20 | | | | | | 3.0 | 3.2 |
| 21 | | | | | | 2.8 | |
| 22 | | | | | | | |
| 23 | | | | | | | 2.8 |

Time: 80°W.

Length of time sweep: 2 Ms to 16 Ms in one minute.

Table 18

San Juan, Puerto Rico (18.4°N, 66.1°W) November, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | F2-M3000 |
|------|------|------|------|------|-----|------|----------|
| 00 | | 3.94 | | | | | 3.1 |
| 01 | | 4.06 | | | | | 3.2 |
| 02 | | 4.28 | | | | | 3.3 |
| 03 | | 3.96 | | | | | 3.4 |
| 04 | | 3.31 | | | | | 3.3 |
| 05 | | 3.10 | | | | | 2.9 |
| 06 | | 3.27 | | | | | 3.1 |
| 07 | 257 | 5.19 | | | | | 3.4 |
| 08 | 265 | 6.54 | 241 | 3.62 | | | 3.3 |
| 09 | 286 | 6.96 | 240 | 4.07 | | 3.04 | 3.2 |
| 10 | 283 | 7.42 | 232 | 4.23 | | 3.15 | 3.2 |
| 11 | 288 | 7.71 | 223 | 4.37 | | 3.26 | 3.2 |
| 12 | 286 | 7.78 | 230 | 4.39 | | 3.30 | 3.2 |
| 13 | 281 | 7.83 | 234 | 4.30 | | 3.29 | 3.2 |
| 14 | 284 | 7.80 | 228 | 4.20 | | 3.19 | 3.2 |
| 15 | 270 | 7.48 | 234 | 3.98 | | 3.33 | 3.2 |
| 16 | 266 | 7.28 | 249 | 3.77 | | 3.03 | 3.3 |
| 17 | 241 | 6.79 | | 3.18 | | | 3.4 |
| 18 | 238 | 6.28 | | | | | 3.5 |
| 19 | 252 | 3.67 | | | | | 3.3 |
| 20 | | 3.24 | | | | | 3.0 |
| 21 | | 3.40 | | | | | 2.9 |
| 22 | | 3.63 | | | | | 3.0 |
| 23 | | 3.80 | | | | | 3.0 |

Time: 60°W.

Length of time sweep: 3 Ms to 12 Ms in eleven minutes. Record centered on the hour.

Table 20

(Corrections and additions to previously issued provisional data)

Brisbane, Q., Australia (27.5°S, 153.0°E) October, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | F2-M3000 |
|------|------|------|------|------|-----|-----|----------|
| 00 | 274 | 5.0 | | | | | 3.2 |
| 01 | 256 | 4.7 | | | | 3.1 | 3.4 |
| 02 | 254 | 4.0 | | | | | |
| 03 | 274 | 3.5 | | | | | 3.1 |
| 04 | 274 | | | | | | |
| 05 | 268 | | | | | | |
| 06 | 242 | 5.0 | | | | | |
| 07 | 272 | 5.9 | | | | | |
| 08 | 288 | 6.8 | | | | | |
| 09 | 280 | | | | | | |
| 10 | 288 | | | | | | |
| 11 | 298 | 7.7 | | | | | |
| 12 | 292 | | | | | | |
| 13 | 294 | | | | | | |
| 14 | 290 | | | | | | |
| 15 | 278 | | | | | | |
| 16 | 267 | | | | | | |
| 17 | 247 | 6.5 | | | | | |
| 18 | 237 | | | | | | |
| 19 | 251 | 5.9 | | | | 3.4 | |
| 20 | 278 | 5.5 | | | | 3.0 | 3.0 |
| 21 | 286 | | | | | | |
| 22 | 277 | | | | | | |
| 23 | 280 | 5.2 | | | | 2.6 | |

Time: 150°E.

Length of time sweep: 2.2 Ms to 12.5 Ms in two minutes, thirty seconds.

Table 21

(Corrections and additions to previously issued provisional data)

Mt. Stromlo, N.S.W., Australia (35.5°S, 149.0°E) October, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | fEs | F2-M3000 |
|------|------|------|------|------|-----|------|-----|----------|
| 00 | 286 | | | | | | | |
| 01 | 267 | | | | | | | 3.1 |
| 02 | 256 | 3.9 | | | | | | |
| 03 | 266 | | | | | | | |
| 04 | 279 | | | | | | | |
| 05 | 273 | 3.4 | | | | | | |
| 06 | 253 | 4.4 | | | | | | |
| 07 | 304 | | 239 | 5.82 | 109 | 1.98 | | |
| 08 | 309 | 5.7 | 225 | 4.12 | 104 | 2.47 | | |
| 09 | 326 | 6.4 | 219 | 4.37 | 103 | 2.84 | | |
| 10 | 320 | | 212 | 4.45 | 104 | 3.10 | | |
| 11 | 317 | | 212 | 4.62 | 102 | 3.28 | | |
| 12 | 321 | 6.9 | 208 | 4.62 | 102 | 3.39 | | |
| 13 | 318 | | 208 | 4.47 | 102 | 3.49 | | |
| 14 | 312 | | 208 | 4.42 | 103 | 3.40 | | |
| 15 | 299 | | 219 | 4.26 | 104 | 3.30 | | |
| 16 | 285 | | 232 | 3.97 | 106 | 3.11 | | |
| 17 | 264 | | 241 | 3.38 | 111 | 2.80 | | |
| 18 | 252 | | | | | 2.35 | | |
| 19 | 255 | 5.6 | | | | | | |
| 20 | 267 | | | | | | | |
| 21 | 275 | | | | | | | |
| 22 | 281 | | | | | | | |
| 23 | 284 | | | | | | | |

Time: 150°E.

Length of time sweep: 1.6 Mc to 12.6 Mc in two minutes.

Table 23

Madras, India (13.0°N, 80.2°E) July, 1944

(Note: Extraordinary-ray critical frequency reported)

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E |
|------|------|------|------|------|-----|-----|
| 00 | | | | | | |
| 01 | | | | | | |
| 02 | | | | | | |
| 03 | | | | | | |
| 04 | | | | | | |
| 05 | | | | | | |
| 06 | | | | | | |
| 07 | 4.28 | | | | | |
| 08 | 5.18 | | | | | |
| 09 | 6.02 | | | | | |
| 10 | 6.76 | | | | | |
| 11 | 6.81 | | | | | |
| 12 | 6.70 | | | | | |
| 13 | 6.76 | | | | | |
| 14 | 7.04 | | | | | |
| 15 | 7.21 | | | | | |
| 16 | 7.45 | | | | | |
| 17 | 7.59 | | | | | |
| 18 | 8.20 | | | | | |
| 19 | 8.42 | | | | | |
| 20 | 8.02 | | | | | |
| 21 | 6.50 | | | | | |
| 22 | 4.78 | | | | | |
| 23 | | | | | | |

Time: 97.5°E.

Table 22

(Corrections and additions to previously issued provisional data)

Christchurch, N.Z. (43.5°S, 172.6°E) October, 1944

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E | fEs | F2-M3000 |
|------|------|------|------|------|-----|------|-----|----------|
| 00 | | | | | | | | |
| 01 | | | | | | | | |
| 02 | | | | | | | | |
| 03 | 254 | | | | | | | |
| 04 | | | | | | | | |
| 05 | | | | | | | | |
| 06 | | | | | | | | |
| 07 | | | | | | 2.52 | | |
| 08 | | | 211 | | 100 | 2.68 | | |
| 09 | | | | | 99 | 2.90 | 3.1 | |
| 10 | | | | | | | 3.3 | |
| 11 | | | | | | | 3.0 | |
| 12 | | | 196 | | | | 2.9 | |
| 13 | 280 | | | | 99 | 3.13 | 3.2 | |
| 14 | | | | | 99 | 3.07 | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | 238 | | | | | | | |
| 20 | | | | | | | | |
| 21 | | 4.75 | | | | | | |
| 22 | | 4.52 | | | | | | |
| 23 | | | | | | | | |

Time: 172.5°E.

Length of time sweep: 2.6 Mc to 12 Mc in two minutes.

Table 24

Madras, India (13.0°N, 80.2°E) August, 1944

(Note: Extraordinary-ray critical frequency reported)

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E |
|------|------|------|------|------|-----|-----|
| 00 | | | | | | |
| 01 | | | | | | |
| 02 | | | | | | |
| 03 | | | | | | |
| 04 | | | | | | |
| 05 | | | | | | |
| 06 | | | | | | |
| 07 | | | | | | |
| 08 | | | | | | |
| 09 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |

Time: 97.5°E.

Table 25

Madras, India (13.0°N, 80.2°E) September, 1944

(Note: Extraordinary-ray critical frequency reported)

| Time | h'F2 | f°F2 | h'F1 | f°F1 | h'E | f°E |
|------|------|------|------|------|-----|-----|
| 00 | | | | | | |
| 01 | | | | | | |
| 02 | | | | | | |
| 03 | | | | | | |
| 04 | | | | | | |
| 05 | | | | | | |
| 06 | | | | | | |
| 07 | | | | | | |
| 08 | | | | | | |
| 09 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |

Time: 97.5°E.

TABLE 26

IONOSPHERE DATA - I

Ionosphere Station

Washington, D.C.

National Bureau of Standards

(Institution)

Hourly values of $h'F_2$ in (m) for November 1944 (Month)Records measured by: S.M.O.
M.R.R.

RESTRICTED

TIME: 75°W MERIDIAN

| TIME: 3:56 PM - 6:00 PM | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|------|
| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean |
| 1 | 280 | 300 | 300 | 260 | 260 | 260 | 240 | 230 | 240 | 260 | 260 | 240 | 270 | 240 | 260 | 260 | 240 | 220 | 220 | 240 | 240 | 240 | 260 | 280 | 6060 | |
| 2 | 270 | 280 | 260 | 280 | 240 | 220 | 240 | 220 | 240 | 240 | 260 | 260 | 260 | 260 | 270 | 260 | 240 | 220 | 220 | 230 | 230 | 240 | 260 | 280 | 5990 | |
| 3 | 270 | 280 | 280 | 260 | 260 | 240 | 220 | 220 | 220 | 240 | 240 | 260 | 260 | 260 | 260 | 240 | 220 | 220 | 230 | 220 | 220 | 240 | 270 | 280 | 5970 | |
| 4 | 280 | 280 | 240 | 280 | 260 | 280 | 260 | 260 | 280 | 280 | 280 | 280 | 280 | 300 | 260 | 350 | 250 | 240 | 260 | 250 | 260 | 260 | 300 | 300 | 6490 | |
| 5 | 300 | 270 | 280 | 280 | 280 | 300 | 260 | 240 | C | C | C | C | C | C | C | 280 | 250 | 240 | 240 | 250 | 280 | 270 | 280 | 4580 | | |
| 6 | 260 | 260 | 280 | 280 | 260 | 260 | 240 | 240 | 270 | 280 | 280 | 280 | 280 | 280 | 280 | 270 | 240 | 230 | 220 | 230 | 240 | 260 | 260 | 280 | 6290 | |
| 7 | 260 | 280 | 260 | 260 | 240 | 240 | 260 | 230 | 240 | 240 | 260 | 260 | 280 | 270 | 280 | C | C | C | C | 220 | 250 | 270 | 260 | 270 | 5120 | |
| 8 | 280 | 280 | 260 | 260 | 260 | 260 | 240 | 240 | 220 | 220 | 280 | 260 | 270 | 270 | 260 | 240 | 230 | 210 | 200 | 220 | 240 | 290 | 280 | 300 | 6070 | |
| 9 | 300 | 260 | 270 | 260 | 270 | 260 | 240 | 220 | 240 | 240 | 240 | 250 | 270 | 260 | 260 | 240 | 240 | 220 | 220 | 230 | 260 | 280 | 290 | 280 | 6100 | |
| 10 | 300 | 280 | 280 | 270 | 260 | 240 | 240 | 220 | 220 | 240 | 240 | 260 | 270 | 270 | 260 | 240 | 220 | 220 | 220 | 220 | 220 | 260 | 280 | 280 | 6010 | |
| 11 | 280 | 260 | 260 | 260 | 240 | 220 | 240 | 220 | 240 | 240 | 240 | 260 | 240 | 270 | 260 | 240 | 230 | 200 | 220 | 220 | 230 | 270 | 280 | 260 | 5900 | |
| 12 | 260 | 260 | 270 | 260 | 240 | 230 | 220 | 220 | 220 | 240 | 240 | 240 | 250 | 260 | 250 | 240 | 230 | 210 | 220 | 220 | 220 | 250 | 280 | 260 | 5950 | |
| 13 | 300 | 280 | 280 | 240 | 240 | 230 | 220 | 220 | 220 | 220 | 220 | 240 | 260 | 240 | 240 | 240 | 220 | 210 | 220 | 240 | 240 | 240 | 280 | 280 | 5840 | |
| 14 | 280 | 260 | 260 | 240 | 220 | 220 | 220 | 220 | 220 | 220 | 240 | 260 | 260 | 270 | 240 | 240 | 220 | 220 | 220 | 240 | 240 | 240 | 280 | 280 | 5830 | |
| 15 | 280 | 280 | 260 | 240 | 220 | 220 | 240 | 210 | 220 | 240 | 240 | 240 | 240 | 270 | 260 | 240 | 220 | 200 | 200 | 230 | 230 | 300 | 300 | 300 | 5850 | |
| 16 | 280 | 280 | 260 | 260 | 260 | 240 | 220 | 220 | 220 | 240 | 240 | 250 | 250 | 260 | 260 | 240 | 220 | 200 | 220 | 230 | 240 | 260 | 260 | 260 | 5830 | |
| 17 | 240 | 240 | 240 | 240 | 240 | 240 | 220 | 220 | 220 | 240 | 240 | 260 | 240 | 240 | 260 | 240 | 220 | 200 | 200 | 240 | 240 | 240 | 250 | 260 | 5660 | |
| 18 | 300 | 260 | 240 | 240 | 240 | 230 | 240 | 220 | 220 | 220 | 240 | 240 | 260 | 270 | 240 | 220 | 240 | 220 | 220 | 240 | 240 | 260 | 260 | 280 | 5840 | |
| 19 | 280 | 260 | 260 | 240 | 240 | 220 | 220 | 220 | 240 | 230 | 240 | 250 | 240 | 260 | 240 | 240 | 230 | 200 | 220 | 220 | 240 | 280 | 280 | 260 | 5830 | |
| 20 | 260 | 280 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 280 | 260 | C | C | C | C | C | C | C | C | C | C | C | C | 3000 | |
| 21 | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | 260 | 260 | 260 | 780 | |
| 22 | 260 | 240 | 240 | 240 | 250 | 260 | 250 | 220 | 240 | C | C | C | 260 | 250 | 240 | 250 | 220 | 220 | 240 | 250 | 240 | 260 | 260 | 270 | 5160 | |
| 23 | 260 | 260 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 260 | 260 | 240 | 240 | 220 | 220 | 240 | 280 | 260 | 280 | 280 | 280 | 5970 | |
| 24 | 290 | 300 | 300 | 280 | 260 | 260 | 250 | 230 | 220 | 220 | 220 | 220 | 240 | 220 | 240 | 220 | 220 | 220 | 220 | 280 | 280 | 300 | 310 | 310 | 6080 | |
| 25 | 300 | 270 | 260 | 240 | 240 | 240 | 240 | 220 | 210 | 220 | 240 | 240 | 240 | C | C | 220 | 220 | 220 | 220 | 240 | 280 | 300 | 280 | 300 | 5440 | |
| 26 | 290 | 260 | 260 | 240 | 240 | 220 | 220 | 240 | 240 | 220 | 240 | 260 | 230 | 230 | 240 | 240 | 230 | 200 | 220 | 240 | 300 | 280 | 280 | 300 | 5930 | |
| 27 | 280 | 280 | 280 | 280 | 240 | 220 | 260 | 230 | 220 | 220 | 220 | 240 | 230 | C | C | 240 | 220 | 220 | 220 | 240 | 280 | 280 | 280 | 300 | 5380 | |
| 28 | 290 | 260 | 270 | 250 | 240 | 220 | 240 | 240 | 230 | 240 | 240 | 240 | 240 | 240 | C | 250 | 220 | 210 | 220 | 240 | 260 | 270 | 280 | 320 | 5910 | |
| 29 | 280 | 280 | 280 | 240 | 230 | 220 | 220 | 220 | 220 | 240 | 240 | 260 | 260 | 240 | 240 | 240 | 220 | 220 | 220 | 270 | 250 | 260 | 280 | 260 | 5930 | |
| 30 | 260 | 270 | 260 | 260 | 250 | 240 | 240 | 230 | 240 | 220 | 240 | 240 | 260 | 260 | 240 | 240 | 230 | 230 | 240 | 240 | 220 | 240 | 260 | 260 | 5870 | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | 8050 | 7850 | 7670 | 7380 | 7180 | 6950 | 6970 | 6610 | 6490 | 6390 | 6630 | 6790 | 6890 | 6750 | 6330 | 6550 | 6160 | 5840 | 6030 | 6680 | 6950 | 7700 | 7980 | 8130 | 166650 | |
| Mean | 278 | 271 | 264 | 254 | 248 | 240 | 240 | 228 | 237 | 237 | 246 | 251 | 255 | 258 | 253 | 242 | 228 | 216 | 223 | 238 | 248 | 266 | 275 | 280 | | |
| Median | 278 | 271 | 264 | 254 | 248 | 240 | 240 | 228 | 237 | 237 | 246 | 251 | 255 | 258 | 253 | 242 | 228 | 216 | 223 | 238 | 248 | 266 | 275 | 280 | | |

¹ For all days of the month² For quiet days $h'F_2$

November, 1944

TABLE 27

IONOSPHERE DATA-2

Washington, D.C.

Ionosphere Station

National Bureau Of Standards

Hourly values of f^oF_2 in $^{\circ}$ for November 1944

M.R.R. S.M.O.

RESTRICTED

TIME: 75°W MERIDIAN

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean |
|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|-------|-------------------|-------------------|-------------------|-------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------|------|
| 1 | 28 ^F | 28 | 29 ^F | 32 | 34 | 32 | 32 | 49 | 61 | 68 | 66 | 68 | 74 | 70 | 66 | 70 | 70 | 60 | 49 | 48 | 34 | 31 | 26 | 25 | 115.5 | |
| 2 | 28 | 33 | 34 | 36 ^F | 36 | 35 | 29 | 46 | 60 | 71 | 66 | 72 | 70 | 70 | 67 | 71 | 70 | 60 | 39 | 38 | (34) ^F | 31 | (25) ^F | (25) ^F | 114.6 | |
| 3 | 24 ^F | 26 ^F | 30 ^F | 34 | 34 ^F | 35 | 35 ^F | 49 | 56 | 61 | 67 | (74) | 81 | 82 | 88 | 80 | 70 | 56 | 51 | 41 | 34 | 30 | 30 | 31 | 119.9 | |
| 4 | 33 | 34 | 34 | 23 ^F | 23 ^F | 21 ^F | 22 ^F | 37 | 48 | 55 | 64 | 64 | 68 | 67 | 70 | (62) ^F | (61) | (52) | (45) ^F | 31 | (36) | (34) | (30) | (33) | 104.2 | |
| 5 | 33 | (33) | 29 | (27) | 28 | (22) | (38) | C | C | C | C | C | C | C | C | (69) | (67) ^F | (62) | (60) | (45) | (39) | 34 | (31) | (34) | 95.1 | |
| 6 | (54) | 29 | (34) | 38 | 38 | 28 | 27 | C | C | (60) | (65) ^F | (65) ^F | 62 | 56 | 62 | 60 | 56 | 52 | 43 | 36 ^F | 28 ^F | 25 ^F | 21 ^F | (21) ^F | 94.7 | |
| 7 | (21) ^F | 17 ^F | 17 ^F | (19) ^F | 18 ^F | 19 ^F | 21 ^F | 45 | 65 | (62) | 63 | 62 | 67 | 62 | (73) | C | C | C | C | 38 ^F | 27 | 28 ^F | 31 | 21 ^F | 78.6 | |
| 8 | 26 ^F | 25 | 30 ^F | 29 ^F | 22 ^F | 21 ^F | (15) ^F | 43 ^F | 54 | 64 | 64 | 64 | 66 | 66 | 66 | 66 | 68 | 59 | 38 ^F | 30 ^F | 22 ^F | 20 ^F | 19 ^F | 19 ^F | 99.9 | |
| 9 | (49) ^F | (19) ^F | (19) ^F | 17 ^F | 16 ^F | (18) ^F | (17) ^F | 42 | 55 | 66 | 56 | 64 | 70 | 77 | 75 | 72 | 74 | 56 | 38 ^F | 25 ^F | 21 ^F | 19 ^F | 18 ^F | (18) ^F | 97.1 | |
| 10 | 17 ^F | 16 ^F | (19) ^F | (19) ^F | 28 ^F | 32 | 33 | 44 | 66 | 67 | 66 | 72 | (78) | (78) | (79) | (78) | 72 | 67 | 49 ^F | 45 ^F | 33 ^F | 26 ^F | 23 ^F | (25) ^F | 113.2 | |
| 11 | 22 ^F | (27) ^F | 28 ^F | 31 ^F | 33 ^F | 32 ^F | 26 ^F | 40 | 56 | 59 | 64 | 67 | 70 | 63 | 72 | 72 | 71 | 56 | 36 ^F | 33 ^F | 23 ^F | 22 ^F | 23 ^F | 26 ^F | 105.2 | |
| 12 | 26 ^F | 23 ^F | 19 ^F | 22 ^F | 28 ^F | 32 ^F | 30 ^F | 43 | 55 | 62 | 66 | 60 | 67 | 70 | 67 | 67 | 67 | 56 | 32 ^F | 28 ^F | 21 ^F | (20) ^F | (20) ^F | (18) ^F | 100.2 | |
| 13 | 20 ^F | 22 ^F | 23 ^F | 27 ^F | 28 ^F | 29 ^F | 27 ^F | 44 | 54 | 62 | 66 | 62 | 65 | 66 | 58 | 64 | 62 | 56 | 37 ^F | 29 ^F | 28 ^F | 26 ^F | 23 ^F | (22) ^F | 100.1 | |
| 14 | 23 ^F | 24 ^F | 31 ^F | 33 | 33 ^F | 32 ^F | 32 | 44 | 57 | 59 | 59 | 66 | 71 | 69 | 70 | 73 | 62 | 54 | 38 | 33 | 32 | 26 | 22 ^F | 20 ^F | 106.8 | |
| 15 | 19 ^F | 22 ^F | 29 ^F | 33 | 34 | 34 | 26 | 42 | 62 | 57 | 62 | 61 | 61 | 64 | 64 | 66 | 66 | 53 | 35 | 32 | 25 | 17 | 18 | 19 | 100.3 | |
| 16 | 20 ^F | 24 ^F | 28 | 28 ^F | 28 | 31 | 26 | 41 | 52 | 54 | 60 | 65 | (62) ^F | 70 | 63 | 69 | 64 | 56 | 42 | 34 | 33 | 27 | 24 | 27 | 102.5 | |
| 17 | 29 | 29 ^F | 32 | 34 | 37 ^F | 38 | 35 | 49 | 62 | 57 | (64) | 72 | 64 | 56 | 67 | 68 | 62 | 54 | 31 ^F | 30 | 26 | 26 | 25 | 23 ^F | 106.7 | |
| 18 | 21 ^F | 27 | 34 | 34 | 35 | 37 | 35 | 44 | 65 | 67 | 62 | 64 | 65 | 74 | 72 | 66 | 61 | 54 | 38 | 32 | 28 | 26 | 27 | 32 | 110.1 | |
| 19 | 33 | 35 | 35 | 37 | 38 | 37 | 29 | 41 | (57) | 58 | 65 | 64 | 68 | (68) | 68 | (64) | (63) | 59 | 38 | 32 | 29 | 22 | 25 ^F | 27 | 109.5 | |
| 20 | 32 ^F | 33 ^F | 34 ^F | 36 ^F | 34 | 26 ^F | 32 | 38 | (56) | (57) | (70) | (74) | C | C | C | C | C | C | C | C | C | C | C | C | 52.2 | |
| 21 | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | 71 | |
| 22 | 24 ^F | (27) | 28 ^F | 30 ^F | 33 ^F | 33 | 31 | 37 | 54 | C | C | C | 62 | (62) | 63 | 62 | 62 | 44 ^F | 34 ^F | 32 ^F | 29 ^F | 25 ^F | 23 ^F | 23 ^F | 81.9 | |
| 23 | (30) ^F | 31 | 34 | 34 ^F | 37 ^F | 34 ^F | 30 ^F | 36 ^F | 54 | 56 | 61 | 62 | 62 | 72 | 70 | 62 | 62 | 61 | 41 | 32 | 30 | 28 | (27) ^F | 24 ^F | 107.0 | |
| 24 | 21 ^F | 21 ^F | 22 ^F | 23 ^F | 25 ^F | 28 ^F | 26 ^F | 35 ^F | 44 | 54 | 54 | 62 | 62 | 62 | 62 | 60 | 60 | 42 | (30) ^F | (24) ^F | 23 | (22) ^F | 20 ^F | 20 ^F | 91.4 | |
| 25 | 21 ^F | 20 ^F | 23 ^F | 27 ^F | 28 ^F | 29 ^F | 29 ^F | 37 ^F | 51 | 57 | 60 | 61 | 61 | 61 | 61 | 62 | 62 | 55 | 51 | (27) ^F | 29 ^F | 26 ^F | 23 ^F | 24 ^F | 82.6 | |
| 26 | (31) ^F | 26 ^F | 27 ^F | 32 ^F | 32 ^F | 36 ^F | 32 ^F | 37 ^F | 54 | 62 | 62 | 64 | 64 | 67 | 64 | 62 | 60 | 57 | 32 | (24) ^F | 22 | 21 | (22) | 23 ^F | 102.0 | |
| 27 | 26 ^F | 28 ^F | 33 ^F | 34 | 35 | 30 | 24 ^F | 36 ^F | 56 | 61 | 57 | 66 | (54) | C | C | 64 | 62 | 52 | 32 ^F | 26 ^F | 23 ^F | 23 ^F | 21 ^F | 21 ^F | 86.4 | |
| 28 | 20 ^F | 22 ^F | 23 ^F | 28 ^F | (31) ^F | 29 | 23 ^F | 36 | 54 | 62 | 60 | (60) | 65 | (62) | 55 | 57 | 62 | 51 | 37 | 32 | (24) ^F | 23 | 21 ^F | 19 ^F | 96.4 | |
| 29 | 19 ^F | 21 ^F | 31 ^F | 37 ^F | 39 | 33 | 26 ^F | (33) ^F | 48 | 60 | 60 | 58 | 60 | 61 | 63 | 64 | 52 | 55 | (33) ^F | 28 | 23 | 23 ^F | 22 ^F | 22 ^F | 97.1 | |
| 30 | 22 ^F | 23 ^F | 26 ^F | 28 ^F | (25) ^F | 28 ^F | 27 ^F | 38 ^F | (56) | 62 | (66) | 60 | 71 | 70 | 61 | 62 | 64 | (49) ^F | (38) ^F | 32 ^F | 36 ^F | 23 ^F | 22 ^F | 22 ^F | 100.1 | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | 72.4 | 74.5 | 81.5 | 86.2 | 89.0 | 87.1 | 81.5 | 110.6 | 152.2 | 164.6 | 170.2 | 175.0 | 179.0 | 167.2 | 169.6 | 179.6 | 172.3 | 148.8 | 104.3 | 92.4 | 77.9 | 71.9 | 68.8 | 69.7 | 2848.5 | |
| Mean | 250 | 257 | 281 | 297 | 307 | 300 | 281 | 410 | 564 | 610 | 630 | 648 | 663 | 677 | 679 | 665 | 638 | 551 | 386 | 330 | 278 | 248 | 237 | 240 | | |
| Median | 250 | 257 | 281 | 297 | 307 | 300 | 281 | 410 | 564 | 610 | 630 | 648 | 663 | 677 | 679 | 665 | 638 | 551 | 386 | 330 | 278 | 248 | 237 | 240 | | |

¹ For all days of the month² For quiet days $h'F_2$

November, 1944

IONOSPHERE DATA-3

Washington, D.C.

Ionosphere Station

(Location)
National Bureau of Standards

(Station)

F₂ for November 1944
Half hourly values (Month)M.S.F.P. U.S.M.O.
M.R.R.

RESTRICTED

TIME: 75° W MERIDIAN

| Day | 0030 | 0130 | 0230 | 0330 | 0430 | 0530 | 0630 | 0730 | 0830 | 0930 | 1030 | 1130 | 1230 | 1330 | 1430 | 1530 | 1630 | 1730 | 1830 | 1930 | 2030 | 2130 | 2230 | 2330 | Sum | Mean |
|--------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|
| 1 | 2.8 | 3.0 | 3.0 | 3.3 | 3.6 | 3.1 | 3.7 | 5.5 | 6.4 | 6.4 | (6.4) | 7.2 | 7.4 | 7.0 | 6.8 | 7.0 | 6.5 | 5.4 | 4.6 | 4.4 | 3.4 | 2.8 | 2.5 | 2.6 | 115.2 | |
| 2 | 3.0 | 3.4 | 3.5 | 3.7 | 3.7 | 3.1 | 3.5 | 5.2 | 6.7 | 6.2 | 7.0 | 7.4 | 7.2 | 6.8 | 7.0 | 7.3 | 6.7 | 4.9 | 3.9 | 3.7 | 3.2 | 2.8 | 2.5 | (2.4) | 114.8 | |
| 3 | 2.3 | 2.7 | 3.3 | 3.4 | 3.5 | 3.7 | 3.8 | 6.0 | 6.2 | 6.5 | 7.1 | 8.0 | (7.6) | (8.6) | 8.8 | 7.4 | 6.4 | 5.4 | 4.7 | 3.7 | 3.2 | 3.1 | 3.0 | 3.3 | 121.7 | |
| 4 | 3.4 | 3.4 | 2.8 | 2.2 | 2.2 | 2.1 | 2.9 | 4.4 | 5.2 | 6.0 | 6.8 | 6.6 | 6.5 | 7.2 | (6.9) | (6.4) | 6.0 | (5.0) | (3.9) | 3.3 | (2.3) | (2.8) | (3.1) | 3.3 | 104.9 | |
| 5 | 3.5 | (2.8) | (2.7) | (2.9) | (2.8) | (3.0) | C | C | C | C | C | C | C | C | C | (6.9) | (6.4) | (6.2) | (5.4) | (3.8) | (3.6) | (3.5) | (3.4) | (3.4) | 60.3 | |
| 6 | (2.8) | (3.7) | 3.7 | 3.8 | 3.2 | (2.6) | 3.3 | C | C | [6.6] | 6.6 | [6.3] | 6.0 | [6.0] | 5.9 | 5.8 | 5.4 | 4.8 | 4.0 | 3.2 | 2.6 | 2.2 | (2.2) | (2.1) | 92.2 | |
| 7 | 1.9 | (1.7) | (2.0) | 1.7 | 1.8 | 2.0 | 3.2 | 5.4 | 6.0 | 6.3 | (6.2) | 6.6 | 6.8 | 6.7 | (7.0) | C | C | C | C | 3.3 | 2.6 | 2.8 | 3.0 | 2.9 | 79.9 | |
| 8 | 2.1 | 2.8 | (3.2) | (2.4) | 2.1 | 1.9 | 2.7 | 5.4 | 6.1 | 6.6 | 6.4 | 6.4 | 6.6 | 6.8 | 7.0 | 7.1 | 6.6 | 5.0 | 3.2 | 2.6 | 2.0 | 1.9 | 1.9 | 1.9 | 99.1 | |
| 9 | 1.4 | 1.7 | (1.6) | (1.6) | (1.6) | 1.8 | 2.7 | 5.1 | 6.1 | 6.6 | 6.4 | 6.6 | 7.0 | 7.2 | 7.2 | 7.0 | 7.3 | (4.3) | 2.9 | 2.2 | 2.0 | (1.9) | 1.9 | (.7) | 96.6 | |
| 10 | (1.6) | (1.7) | (2.3) | 2.5 | 2.5 | 3.3 | 3.5 | 5.4 | 6.1 | 6.3 | 6.6 | 7.3 | 7.5 | 7.7 | 7.8 | 7.6 | 6.8 | 5.8 | 4.9 | 3.8 | 2.6 | 2.3 | 2.5 | (2.1) | 109.9 | |
| 11 | (2.4) | (2.7) | (2.9) | 3.2 | 3.3 | 2.8 | 2.9 | 5.1 | 5.6 | [6.2] | 6.1 | (6.9) | 6.0 | [6.8] | 7.2 | 7.0 | 6.6 | 4.6 | 3.5 | 2.7 | 2.4 | 2.3 | 2.5 | 2.7 | 104.4 | |
| 12 | 2.5 | 2.1 | 2.0 | 2.6 | 3.2 | 3.3 | 3.3 | 5.3 | 6.1 | 6.6 | 6.5 | 6.5 | 7.1 | 6.9 | 6.5 | 6.6 | 6.3 | 3.9 | 3.2 | (2.4) | (2.1) | (1.9) | [.4] | 1.9 | 100.7 | |
| 13 | 2.1 | 2.2 | 2.6 | 2.8 | 2.8 | 2.8 | 3.3 | 5.3 | (6.1) | 6.4 | 6.5 | 6.2 | (7.0) | 6.5 | 6.2 | 6.2 | 5.9 | 4.1 | 3.0 | 2.9 | 2.8 | 2.3 | 2.3 | 2.3 | 100.6 | |
| 14 | 2.3 | 2.8 | 3.3 | 3.4 | 3.3 | 3.2 | 3.3 | 5.1 | 6.0 | 5.4 | 6.3 | 6.6 | 6.6 | 7.0 | 7.3 | 6.6 | 6.3 | 4.1 | 3.5 | (3.3) | 2.7 | 2.1 | 2.0 | 1.9 | 104.4 | |
| 15 | 2.0 | 2.6 | 3.1 | 3.3 | 3.5 | 2.9 | 2.7 | 5.6 | 5.6 | 6.1 | 6.2 | 7.2 | 6.3 | 6.4 | 6.6 | 7.0 | 6.3 | (4.5) | 3.7 | 2.7 | 2.0 | (1.7) | 1.8 | 1.9 | 101.7 | |
| 16 | 2.1 | 2.6 | 2.7 | 2.8 | 3.1 | 3.0 | 3.2 | 5.3 | 5.6 | 6.2 | 6.4 | 6.8 | 6.6 | [6.4] | 7.0 | 6.7 | 5.7 | 5.0 | 3.7 | 3.4 | 3.0 | 2.5 | 2.4 | 2.8 | 105.0 | |
| 17 | 2.9 | 3.2 | 3.3 | 3.7 | 3.8 | 3.1 | 3.7 | 5.6 | 5.6 | 6.4 | 5.8 | 7.0 | 6.3 | 6.2 | 6.8 | (7.0) | 7.0 | 3.8 | 3.3 | 2.8 | 2.6 | 2.6 | 2.3 | 2.1 | 107.6 | |
| 18 | 2.4 | 3.0 | 3.3 | 3.4 | 3.6 | 3.6 | 3.7 | 5.7 | 5.7 | 6.0 | 6.1 | 6.6 | 6.8 | 7.4 | 7.1 | 6.6 | 5.8 | 4.6 | 3.2 | 3.1 | 2.7 | 2.6 | 3.0 | 3.1 | 109.7 | |
| 19 | 3.5 | 3.5 | 3.6 | 3.6 | 3.8 | 3.3 | 3.3 | 5.0 | (6.0) | 6.2 | 6.2 | (6.5) | (6.2) | (7.2) | (6.7) | 6.5 | 6.2 | 4.5 | 3.3 | 3.0 | 2.4 | 2.3 | 2.8 | 3.0 | 108.6 | |
| 20 | 2.9 | 3.5 | 3.6 | 3.4 | 3.3 | 2.6 | 3.3 | 4.9 | (6.2) | 6.4 | [7.3] | (7.2) | C | C | C | C | C | C | C | C | C | C | C | C | 54.6 | |
| 21 | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | | |
| 22 | (2.7) | 2.7 | 2.9 | 3.4 | 3.4 | 3.2 | 3.0 | 4.9 | C | C | C | C | [6.2] | [6.3] | 6.0 | 6.1 | 5.2 | 4.5 | 3.5 | 3.1 | 2.7 | 2.4 | 2.3 | 2.6 | 77.1 | |
| 23 | 3.2 | 3.3 | 3.3 | 3.5 | 3.5 | 3.2 | 3.2 | 4.6 | 5.4 | 5.9 | 6.7 | 6.0 | 6.8 | 7.3 | 6.7 | 6.3 | 5.4 | (4.4) | 3.5 | 2.8 | 2.9 | (2.8) | 2.6 | 2.3 | 105.6 | |
| 24 | 2.3 | (2.2) | 2.3 | 2.5 | 2.7 | 2.8 | 2.7 | 4.6 | 5.0 | 6.0 | 5.7 | 5.2 | 5.7 | 7.3 | 6.4 | 6.3 | 6.0 | 3.8 | (2.6) | 2.3 | [2.3] | 2.0 | 1.9 | 2.0 | 92.6 | |
| 25 | 2.1 | 2.1 | 2.5 | 2.6 | 2.8 | 2.9 | 2.9 | 4.6 | 6.0 | 6.4 | 5.7 | 6.2 | C | C | C | 5.4 | 6.1 | 4.3 | 2.9 | 2.9 | 2.3 | 2.3 | 2.5 | 3.0 | 77.5 | |
| 26 | (2.5) | 2.6 | 3.0 | 3.1 | 3.6 | 3.3 | 3.1 | 4.9 | 6.1 | 5.7 | 6.4 | 6.7 | 6.8 | 7.0 | 6.3 | 6.1 | 5.8 | 3.3 | (2.7) | [2.3] | 2.2 | 2.1 | 2.2 | 2.4 | 100.2 | |
| 27 | 2.9 | 3.0 | 3.4 | 3.4 | 3.3 | 2.6 | 2.6 | 4.7 | 5.7 | 5.4 | 6.4 | 6.8 | C | C | C | 6.4 | 5.9 | 4.0 | 3.0 | 2.3 | 2.3 | 2.3 | 2.1 | 2.0 | 80.5 | |
| 28 | 2.1 | 2.3 | (2.4) | 3.1 | 3.1 | 2.5 | 2.2 | 4.7 | 6.6 | 6.2 | 6.2 | 6.1 | 6.2 | 6.2 | 6.1 | 6.2 | 5.9 | 3.7 | 3.6 | 3.0 | 2.2 | 2.1 | 1.8 | 1.8 | 96.3 | |
| 29 | 2.0 | 2.8 | 3.5 | 3.9 | 3.8 | 2.6 | 2.6 | 4.7 | 5.1 | [6.7] | 5.7 | 6.4 | [6.0] | 6.1 | 5.6 | 6.5 | 5.4 | 4.7 | (2.8) | 2.6 | 2.2 | 2.2 | 2.2 | 2.1 | 97.6 | |
| 30 | 2.3 | 2.6 | 2.5 | 2.8 | 2.6 | 2.8 | 3.0 | 4.8 | 5.4 | 6.3 | 6.2 | 6.8 | 6.6 | 6.4 | 6.2 | 6.4 | 5.7 | 4.0 | 3.5 | 3.1 | 2.3 | 2.3 | 2.2 | 2.3 | 99.1 | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | 72.5 | 78.0 | 83.8 | 87.8 | 89.7 | 83.7 | 87.3 | 137.8 | 152.2 | 167.0 | 172.5 | 179.9 | 165.8 | 171.4 | 169.1 | 178.4 | 164.6 | 123.8 | 96.0 | 84.7 | 74.8 | 69.3 | 69.1 | 70.2 | 2828.4 | |
| Mean | 2.30 | 2.69 | 2.89 | 3.03 | 3.09 | 2.89 | 3.12 | 5.10 | 5.85 | 6.18 | 6.39 | 6.66 | 6.63 | 6.86 | 6.76 | 6.61 | 6.10 | 4.55 | 3.56 | 3.02 | 2.58 | 2.39 | 2.38 | 2.42 | | |
| Median | 2.50 | 2.69 | 2.89 | 3.03 | 3.09 | 2.89 | 3.12 | 5.10 | 5.85 | 6.18 | 6.39 | 6.66 | 6.63 | 6.86 | 6.76 | 6.61 | 6.10 | 4.55 | 3.56 | 3.02 | 2.58 | 2.39 | 2.38 | 2.42 | | |

1 For all days of the month

2 For quiet days

f^o F₂

November, 1944

TABLE 29

IONOSPHERIC DATA-4

Washington, D.C. _____ Ionosphere Station

National Bureau of Standards _____

RESTRICTED

RECORDED MEASURED BY: S.M.O.
M.R.R.Hourly values of f^oF_1 in km for November 1944
(Month)

TIME: 75° W MERIDIAN

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean | | |
|-------------------|----|----|----|----|----|----|----|----|--------------------|------------------|------------------|--------------------|--------------------|--------------------|-------|-------|----|----|----|----|----|----|----|----|-----|-------|--|--|
| 1 | | | | | | | | | | 200 | 200 | 200 | 220 | 210 | 220 | 240 | | | | | | | | | | 1490 | | |
| 2 | | | | | | | | | | 220 ^H | 220 | 220 | 220 | 220 | 220 | 240 | | | | | | | | | | 1560 | | |
| 3 | | | | | | | | | | 200 | 220 | 200 ^H | (220) | 220 | 210 | (230) | | | | | | | | | | 1500 | | |
| 4 | | | | | | | | | 220 | 220 | 220 | 210 | 200 | 220 | 220 | C | C | | | | | | | | | 1510 | | |
| 5 | | | | | | | | | C | C | C | C | C | C | C | C | C | | | | | | | | | | | |
| 6 | | | | | | | | | C | C | C | (220) ^C | (220) ^C | 210 | 220 | 230 | | | | | | | | | | 1100 | | |
| 7 | | | | | | | | | 200 | 200 | 200 | 200 | 200 | 220 | (240) | C | C | | | | | | | | | 1260 | | |
| 8 | | | | | | | | | (210) ^H | 220 | 200 | 190 | (190) ^H | 240 | 240 | 220 | | | | | | | | | | 1710 | | |
| 9 | | | | | | | | | 200 | 200 | 220 | 200 | 200 | 200 ^H | 240 | A | A | | | | | | | | | 1460 | | |
| 10 | | | | | | | | | 200 | 200 | 200 | 200 | 200 | 240 | 230 | 220 | | | | | | | | | | 1490 | | |
| 11 | | | | | | | | | | 210 | 220 | 200 | 220 | 200 | 220 | 220 | | | | | | | | | | 1490 | | |
| 12 | | | | | | | | | | 220 | 220 | 220 | 220 | 220 | 220 | 220 | | | | | | | | | | 1540 | | |
| 13 | | | | | | | | | | 200 | 220 | 200 | 200 | 220 | 220 | 220 | | | | | | | | | | 1280 | | |
| 14 | | | | | | | | | | | 200 | 200 | 220 | 220 | 230 | 220 | | | | | | | | | | 1290 | | |
| 15 | | | | | | | | | | 210 | 180 ^H | 180 ^H | 220 | 200 | 240 | 220 | | | | | | | | | | 1450 | | |
| 16 | | | | | | | | | | 210 | 220 | 230 | 200 | 200 | 240 | 230 | | | | | | | | | | 1530 | | |
| 17 | | | | | | | | | | 200 | 180 | 200 | 220 | 200 | 230 | 220 | | | | | | | | | | 1450 | | |
| 18 | | | | | | | | | | 210 | 200 | 220 | 220 | 240 | 220 | | | | | | | | | | | 1310 | | |
| 19 | | | | | | | | | 220 | 200 | 200 | 200 | 200 ^H | 220 | 200 | 220 | | | | | | | | | | 1660 | | |
| 20 | | | | | | | | | | 220 | 240 | C | C | C | C | C | C | | | | | | | | | 460 | | |
| 21 | | | | | | | | | C | C | C | C | C | C | C | C | C | | | | | | | | | | | |
| 22 | | | | | | | | | 180 | C | C | C | 200 | (210) ^C | 220 | 240 | | | | | | | | | | 1050 | | |
| 23 | | | | | | | | | | 220 | 220 | 200 | (210) | 200 | 210 | 220 | | | | | | | | | | 1480 | | |
| 24 | | | | | | | | | | | A | A | A | A | 220 | | | | | | | | | | | 220 | | |
| 25 | | | | | | | | | | | 200 | 240 | (220) | C | C | A | | | | | | | | | | 660 | | |
| 26 | | | | | | | | | | | 200 | (180) | 220 | 230 | 220 | | | | | | | | | | | 1050 | | |
| 27 | | | | | | | | | | A | 200 | 220 | 220 | C | C | 220 | | | | | | | | | | 860 | | |
| 28 | | | | | | | | | | 220 | 220 | 210 | 220 | 230 | 220 | 230 | | | | | | | | | | 1550 | | |
| 29 | | | | | | | | | | (220) | 220 | 200 | 220 | 220 | 220 | | | | | | | | | | | 1300 | | |
| 30 | | | | | | | | | | | 210 | 220 | 220 | 200 | 220 | | | | | | | | | | | 1070 | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | | | | | | | | | 1030 | 3980 | 5210 | 5400 | 5540 | 5190 | 5390 | 3840 | | | | | | | | | | 35780 | | |
| Mean ¹ | | | | | | | | | 206 | 209 | 208 | 208 | 213 | 216 | 224 | 226 | | | | | | | | | | | | |
| Median | | | | | | | | | 206 | 209 | 208 | 208 | 213 | 216 | 224 | 226 | | | | | | | | | | | | |

¹For all days of the month²For quiet days $h'F_1$

November, 1944

TABLE 30

IONOSPHERE DATA-5

Washington, D.C.

Ionosphere Station

National Bureau of Standards

Hourly values of f^oF_1 in Mc for November 1944

RESTRICTED

SMO. MRR.

| TIME: 75°W MERIDIAN | | | | | | | | | | | | | | | | | | | | | | | | | 3m | Mean |
|---------------------|----|----|----|----|----|----|----|----|-------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----|-----|----|----|----|----|----|----|----|------|------|
| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| 1 | | | | | | | | | | (3.9) ^M | (4.0) ^M | (4.1) ^M | (4.2) ^M | (4.3) ^M | (4.4) ^M | | | | | | | | | | 20.2 | |
| 2 | | | | | | | | | | (3.9) ^M | (4.0) ^M | (4.1) ^M | (4.2) ^M | (4.3) ^M | (4.4) ^M | | | | | | | | | | 20.2 | |
| 3 | | | | | | | | | | (3.8) ^M | (3.9) ^M | (4.0) ^M | (4.1) ^M | (4.2) ^M | (4.3) ^M | | | | | | | | | | 20.2 | |
| 4 | | | | | | | | | 3.4 | 3.8 | 4 | 4.1 | 4.2 | 4.3 | 4.4 | | | | | | | | | | 20.2 | |
| 5 | | | | | | | | | C | C | C | C | C | C | C | | | | | | | | | | 20.2 | |
| 6 | | | | | | | | | C | C | C | C | C | C | C | | | | | | | | | | 20.2 | |
| 7 | | | | | | | | | (3.7) | (3.8) | (3.9) | (4.0) | (4.1) | (4.2) | (4.3) | | | | | | | | | | 20.2 | |
| 8 | | | | | | | | | A | 3.6 | 3.9 | 3.9 | H | H | H | | | | | | | | | | 20.2 | |
| 9 | | | | | | | | | 2.8 | 3.2 | (3.8) | 3.9 | | | | | | | | | | | | | 20.2 | |
| 10 | | | | | | | | | 3.3 | (3.5) | | | | | | | | | | | | | | | 20.2 | |
| 11 | | | | | | | | | (3.3) | (3.8) | 4.0 | 4.1 | (4.2) | (3.9) | 3.5 | | | | | | | | | | 20.2 | |
| 12 | | | | | | | | | | | | (4.0) | 3.8 | | | | | | | | | | | | 20.2 | |
| 13 | | | | | | | | | | (3.5) | (3.8) | | | | | | | | | | | | | | 20.2 | |
| 14 | | | | | | | | | | | 4.0 | (4.0) | | | | | | | | | | | | | 20.2 | |
| 15 | | | | | | | | | | H | H | H | 3.9 | (3.9) | 3.8 | 3.6 | | | | | | | | | 20.2 | |
| 16 | | | | | | | | | | | | (4.0) | | | | | | | | | | | | | 20.2 | |
| 17 | | | | | | | | | 3.1 | 3.5 | (3.8) | 4.0 | 4.0 | | | | | | | | | | | | 20.2 | |
| 18 | | | | | | | | | | (3.5) | (3.8) | 3.9 | 4.2 | | | | | | | | | | | | 20.2 | |
| 19 | | | | | | | | | | (3.5) | 3.8 | | H | H | 3.5 | | | | | | | | | | 20.2 | |
| 20 | | | | | | | | | | | | (3.9) | C | C | C | C | C | C | | | | | | | 20.2 | |
| 21 | | | | | | | | | C | C | C | C | C | C | C | C | C | C | | | | | | | 20.2 | |
| 22 | | | | | | | | | C | C | C | C | C | C | C | C | C | C | | | | | | | 20.2 | |
| 23 | | | | | | | | | | (3.7) | 3.9 | | | | | | | | | | | | | | 20.2 | |
| 24 | | | | | | | | | | 3.8 | (3.9) | | H | A | | | | | | | | | | | 20.2 | |
| 25 | | | | | | | | | | | | (3.9) | C | C | C | | | | | | | | | | 20.2 | |
| 26 | | | | | | | | | | | | (3.8) | | | | | | | | | | | | | 20.2 | |
| 27 | | | | | | | | | A | 3.6 | | | C | C | C | 3.4 | | | | | | | | | 20.2 | |
| 28 | | | | | | | | | (3.4) | (3.6) | (3.9) | | (4.0) | 3.8 | (3.5) | | | | | | | | | | 20.2 | |
| 29 | | | | | | | | | 3.7 | (3.9) | 4.0 | (4.0) | 3.9 | | | | | | | | | | | | 20.2 | |
| 30 | | | | | | | | | | | 3.8 | | | | | | | | | | | | | | 20.2 | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | 20.2 | |
| Sum | | | | | | | | | 6.2 | 4.2 | 7.1 | 7.5 | 4.0 | 4.3 | 3.0 | 1.4 | | | | | | | | | 34.9 | |
| Mean | | | | | | | | | 3.1 | 3.5 | 3.7 | 3.9 | 4.0 | 3.9 | 3.7 | 3.6 | 3.5 | | | | | | | | | |
| Median | | | | | | | | | 3.1 | 3.5 | 3.7 | 3.9 | 4.0 | 3.9 | 3.7 | 3.6 | 3.5 | | | | | | | | | |

For all days of the month

2 For quiet days

For all days of the month

November, 1944

Washington, D.C.

Ionosphere Station

TABLE 31

IONOSPHERE DATA - 6

National Bureau Of Standards
(Institution)Hourly values of $h' E$ in km for November 1944
(Month)Records measured by S.M.O.
M.R.R.

RESTRICTED

| TIME: 75° W MERIDIAN | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|----|----|----|----|----|----|----|-----|-----|-----|------|------|------|------|------|------|------|-----|-----|----|----|----|----|----|-------|------|--|
| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean | |
| 1 | | | | | | | | 120 | 120 | 120 | 120 | 120 | 110 | 110 | 110 | 120 | 120 | | | | | | | | 1160 | | |
| 2 | | | | | | | | 120 | 120 | 120 | 120 | 120 | 110 | 100 | 100 | 120 | 120 | 120 | | | | | | | 1130 | | |
| 3 | | | | | | | | 120 | 120 | 120 | 120 | 120 | 110 | 100 | 100 | 100 | 120 | | | | | | | | 1010 | | |
| 4 | | | | | | | | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | | | | | | | 840 | | |
| 5 | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | | | | | | | 720 | | |
| 6 | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | | | | | | | 830 | | |
| 7 | | | | | | | | 120 | 120 | 110 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 100 | | | | | | | 1060 | | |
| 8 | | | | | | | | 120 | 120 | 120 | 120 | 120 | 110 | 120 | 110 | 100 | 100 | 100 | 100 | | | | | | 1120 | | |
| 9 | | | | | | | | 120 | 110 | 120 | 110 | 100 | 100 | 120 | 120 | 110 | 100 | 100 | | | | | | | 1010 | | |
| 10 | | | | | | | | 120 | 110 | 110 | 120 | 100 | 100 | 120 | 120 | 120 | 110 | | | | | | | | 1030 | | |
| 11 | | | | | | | | 120 | 110 | 110 | 120 | 100 | 100 | 120 | 120 | 120 | 110 | | | | | | | | 1050 | | |
| 12 | | | | | | | | 120 | 120 | 120 | 120 | 120 | 100 | 110 | 100 | 100 | 110 | | | | | | | | 1000 | | |
| 13 | | | | | | | | 120 | 120 | 120 | 110 | 110 | 110 | 110 | 110 | 110 | 120 | 120 | | | | | | | 1130 | | |
| 14 | | | | | | | | 120 | 110 | 100 | 100 | 100 | 100 | 110 | 120 | 120 | 120 | 120 | | | | | | | 980 | | |
| 15 | | | | | | | | 120 | 120 | 110 | 120 | 110 | 120 | 120 | 120 | 110 | 120 | 120 | | | | | | | 1050 | | |
| 16 | | | | | | | | 120 | 120 | 110 | 100 | 120 | 120 | 120 | 120 | 110 | 120 | 120 | | | | | | | 1160 | | |
| 17 | | | | | | | | 120 | 120 | 120 | 120 | 110 | 120 | 120 | 120 | 120 | 130 | | | | | | | | 1080 | | |
| 18 | | | | | | | | 120 | 120 | 110 | 110 | 110 | 120 | 120 | 120 | 120 | 120 | 120 | | | | | | | 1060 | | |
| 19 | | | | | | | | 120 | 120 | 120 | 120 | 120 | C | C | C | C | C | C | | | | | | | 480 | | |
| 20 | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | | | | | | | | | |
| 21 | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | | | | | | | 700 | | |
| 22 | | | | | | | | 130 | 120 | 110 | 110 | 100 | 100 | 110 | 120 | 120 | 120 | 120 | | | | | | | 1040 | | |
| 23 | | | | | | | | 120 | 120 | 110 | 110 | 100 | 110 | 120 | 120 | 120 | 120 | 120 | | | | | | | 1040 | | |
| 24 | | | | | | | | 120 | 110 | 110 | 120 | 110 | 110 | 120 | 120 | 120 | 110 | | | | | | | | 810 | | |
| 25 | | | | | | | | 120 | 120 | 120 | 110 | 110 | 110 | 120 | 120 | 120 | 130 | | | | | | | | 1080 | | |
| 26 | | | | | | | | 120 | 120 | 120 | 120 | 110 | 110 | 120 | 120 | 120 | 120 | 120 | | | | | | | 820 | | |
| 27 | | | | | | | | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 100 | 120 | 120 | 120 | | | | | | | 1060 | | |
| 28 | | | | | | | | 110 | 100 | 110 | 110 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | | | | | | | 1030 | | |
| 29 | | | | | | | | 120 | 110 | 110 | 120 | 110 | 110 | 110 | 110 | 110 | 120 | 120 | | | | | | | 1020 | | |
| 30 | | | | | | | | 360 | 320 | 300 | 2980 | 3110 | 3020 | 2900 | 2880 | 2860 | 2820 | 220 | | | | | | | 27500 | | |
| 31 | | | | | | | | 120 | 120 | 116 | 115 | 115 | 112 | 116 | 115 | 114 | 117 | 110 | | | | | | | | | |
| Sum | | | | | | | | 120 | 120 | 116 | 115 | 115 | 112 | 116 | 115 | 114 | 117 | 110 | | | | | | | | | |
| Mean ¹ | | | | | | | | 120 | 120 | 116 | 115 | 115 | 112 | 116 | 115 | 114 | 117 | 110 | | | | | | | | | |
| Median | | | | | | | | 120 | 120 | 116 | 115 | 115 | 112 | 116 | 115 | 114 | 117 | 110 | | | | | | | | | |

¹ For all days of the month² For quiet days $h' E$

November, 1944

TABLE 32

IONOSPHERE DATA-7

Washington, D.C.

Ionosphere Station

National Bureau Of Standards

(Location)

(Institution)

Hourly values of f^oE in $^{\circ}$ for November 1944
(Month)

RECORDED BY: J.P. v. S.M.O.
M.R.R.

RESTRICTED

TIME: 75°W MERIDIAN

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean |
|-------------------|----|----|----|----|----|----|----|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------|----|----|----|----|----|----|----|-----|-------|
| 1 | | | | | | | | A | (2.2) ^A | (2.6) | 2.9 | 3.0 | 3.1 | 3.1 | 2.9 | 2.6 | 2.3 | | | | | | | | | 24.7 |
| 2 | | | | | | | | | (2.3) | (2.7) | 2.9 | 3.0 | 3.1 | 3.1 | 2.9 | (2.6) ^A | 2.2 | A | | | | | | | | 24.8 |
| 3 | | | | | | | | | 2.1 | 2.6 | 2.8 | 3.0 | (3.1) | 3.0 | 2.9 | 2.6 | A | | | | | | | | | 22.1 |
| 4 | | | | | | | | | 2.1 | 2.5 | 2.7 | 2.9 | 3.0 | 3.0 | 2.8 | C | C | | | | | | | | | 19.0 |
| 5 | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | | | | | | | | |
| 6 | | | | | | | | C | C | C | (2.7) ^C | (2.9) ^C | (2.9) ^C | 2.9 | (2.6) | 2.4 | (2.0) | | | | | | | | | 15.7 |
| 7 | | | | | | | | A | 2.5 | (2.7) | (2.8) | 3.0 | 2.9 | 2.7 | C | C | C | C | | | | | | | | 16.6 |
| 8 | | | | | | | | A | 2.4 | (2.7) | 2.8 | 2.9 | 3.1 | (2.9) ^F | (2.5) | A | | | | | | | | | | 19.3 |
| 9 | | | | | | | | (2.1) | (2.5) | 2.7 | 2.9 | 3.0 | 2.9 | 2.9 | A | A | | A | | | | | | | | 19.0 |
| 10 | | | | | | | | 2.2 | 2.6 | 2.8 | 2.9 ^F | 2.9 | 3.0 | 2.8 | 2.5 | (2.0) ^F | | | | | | | | | | 23.7 |
| 11 | | | | | | | | A | (2.5) | 2.8 | (3.0) ^F | 3.1 | 3.0 | (2.8) | 2.6 | (2.0) ^F | | | | | | | | | | 21.8 |
| 12 | | | | | | | | (2.0) | 2.5 | 2.8 | 3.0 | (3.0) | (3.0) | 2.5 | A | A | | | | | | | | | | 19.1 |
| 13 | | | | | | | | A | 2.6 | (2.8) | 2.9 | 3.0 | (3.0) | (2.8) | (2.6) | (2.0) ^F | | | | | | | | | | 21.7 |
| 14 | | | | | | | | (2.1) ^F | (2.6) ^F | (2.8) ^F | (2.9) | 3.0 | 2.9 | (2.7) ^A | (2.6) | 1.9 | | | | | | | | | | 23.5 |
| 15 | | | | | | | | A | (2.6) ^A | (2.7) | (2.9) | 3.0 | 2.9 | 2.7 | (2.5) | 2.1 | | | | | | | | | | 21.4 |
| 16 | | | | | | | | 2.1 | 2.5 | (2.7) | 3.0 | 3.0 | 2.9 | 2.7 ^A | 2.4 ^A | 2.0 | | | | | | | | | | 23.3 |
| 17 | | | | | | | | A | 2.2 ^F | 2.7 | 2.8 | 2.9 | 3.1 | 3.0 | 2.8 | 2.5 | 2.0 | | | | | | | | | 24.0 |
| 18 | | | | | | | | (2.2) ^F | (2.7) ^F | 2.4 | (3.0) | 3.0 | 3.0 | 2.8 | 2.5 | (2.0) | | | | | | | | | | 24.1 |
| 19 | | | | | | | | 2.0 | 2.5 | (2.3) | 3.0 | 3.0 | 2.9 | 2.7 | 2.4 | (1.9) | | C | | | | | | | | 23.2 |
| 20 | | | | | | | | 2.0 | (2.4) | (2.7) | (3.0) | C | C | C | C | C | C | C | | | | | | | | 10.1 |
| 21 | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | | | | | | | | |
| 22 | | | | | | | | 1.9 ^A | C | C | C | 3.1 | (2.4) ^C | 2.7 | (2.4) | (2.0) | | | | | | | | | | 15.0 |
| 23 | | | | | | | | 1.9 | 2.2 | 2.7 | (2.8) | 2.9 | (2.8) ^A | (2.8) | 2.3 | A | | | | | | | | | | 20.4 |
| 24 | | | | | | | | A | A | (2.7) | 2.9 | 2.9 | 2.9 | (2.7) | 2.4 | (2.1) ^F | | | | | | | | | | 18.6 |
| 25 | | | | | | | | (2.0) ^F | 2.6 | 2.9 ^F | 3.0 | (3.0) ^F | C | C | A | (1.8) | | | | | | | | | | 15.3 |
| 26 | | | | | | | | (2.0) ^F | 2.5 | (2.8) | 3.0 | (3.0) | 3.0 | 2.8 | (2.4) | 1.9 | | | | | | | | | | 23.4 |
| 27 | | | | | | | | (2.0) ^A | (2.4) ^A | (2.7) ^A | (2.9) | 3.0 | C | C | (2.4) | 1.8 | | | | | | | | | | 17.2 |
| 28 | | | | | | | | (2.1) ^F | (2.6) ^F | 2.9 | 2.9 | 3.0 | 2.9 | 2.7 | 2.4 | (1.8) ^F | | | | | | | | | | 23.3 |
| 29 | | | | | | | | (2.0) ^F | A | A | (2.7) | (3.0) | (2.9) ^A | (2.6) ^C | 2.3 | A | | | | | | | | | | 15.7 |
| 30 | | | | | | | | (2.0) ^F | (2.5) ^A | 2.7 | 2.9 | (2.9) ^A | 2.9 | (2.8) | (2.5) ^F | A | | | | | | | | | | 21.2 |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | | | | | | | | 43.5 | 60.8 | 69.4 | 79.1 | 81.0 | 73.9 | 69.3 | 54.4 | 35.8 | | | | | | | | | | 567.2 |
| Mean ¹ | | | | | | | | 2.07 | 2.53 | 2.78 | 2.93 | 3.00 | 2.96 | 2.77 | 2.47 | 1.99 | | | | | | | | | | |
| Median | | | | | | | | 2.07 | 2.53 | 2.78 | 2.93 | 3.00 | 2.96 | 2.77 | 2.47 | 1.99 | | | | | | | | | | |

¹ For all days of the month

² For quiet days

f°E

November, 1944

TABLE 33

IONOSPHERE DATA-8

Washington, D.C.

Ionosphere Station

National Bureau Of Standards

(Institution)

Hourly values of E_s in $\mu\text{V/cm}$ for November 1944 (Month)

TIME: 75° W MERIDIAN

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 3800 | 4100 | 3700 | 2900 | 3000 | 2600 | 4500 | 3000 | 3300 | 3100 | 3100 | 3100 | 4600 | 3600 | 3100 | 2500 | 2900 | 2900 | 3100 | 2000 | 2900 | 2900 | 3300 | 3300 | 3300 | |
| 2 | 3400 | 3300 | 2700 | 3100 | 2900 | 3300 | 4300 | 3200 | 2800 | 2800 | 3000 | 3000 | 3300 | 3700 | 3100 | 2900 | 2800 | 2900 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | |
| 3 | 2400 | 3000 | 3400 | 2800 | 2900 | 2900 | 2900 | 3900 | 2900 | 3300 | 4100 | 3100 | 3300 | 3700 | 3100 | 3300 | 3300 | 3300 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | |
| 4 | 3000 | 2800 | 2900 | 2900 | 2900 | 2700 | 4200 | 2900 | 2900 | 3300 | 4100 | 3100 | 3300 | 3700 | 3100 | 3300 | 3300 | 3300 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 2000 | 2300 | 2400 | 1000 | 3000 | 4500 | 2200 | 3300 | 4000 | 3100 | 3100 | 3100 | 4600 | 3600 | 3100 | 2500 | 2900 | 2900 | 3100 | 2000 | 2900 | 2900 | 3300 | 3300 | 3300 | |
| 8 | 2400 | 2400 | 2400 | 2300 | 3100 | 3400 | 3000 | 3100 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | |
| 9 | 3100 | 3000 | | 1000 | 2900 | 3100 | 2400 | 2400 | 3100 | 2400 | 3000 | 3000 | 3300 | 3700 | 3100 | 2900 | 2800 | 2900 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | |
| 10 | 1900 | 1700 | 3000 | 3500 | 3900 | 3900 | 3100 | 3100 | 3100 | 3100 | 3100 | 3100 | 3500 | 3100 | 3100 | 3100 | 3100 | 2900 | 2900 | 3100 | 3100 | 3100 | 3100 | 3100 | 3100 | |
| 11 | 4500 | 3100 | 3000 | 3500 | 3900 | 3900 | 3100 | 3100 | 3100 | 3100 | 3100 | 3100 | 3500 | 3100 | 3100 | 3100 | 3100 | 2900 | 2900 | 3100 | 3100 | 3100 | 3100 | 3100 | 3100 | |
| 12 | 4900 | 4700 | 4700 | 3800 | 3500 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | |
| 13 | 4100 | 4000 | 4100 | 3900 | 4700 | 4600 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | |
| 14 | 3700 | 3500 | 2200 | 2400 | 2500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | |
| 15 | 4300 | 3400 | 3100 | 4900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | |
| 16 | 3800 | 3200 | 2900 | 2400 | 1900 | 2400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 | |
| 17 | 1900 | 2100 | 2100 | 4000 | 3700 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | |
| 18 | 2400 | 4000 | 1000 | 2100 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | |
| 19 | 3900 | 3000 | 3100 | 1200 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | 3400 | 4300 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | 2900 | |
| 23 | 3800 | 3900 | 3600 | 4100 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | |
| 24 | 3800 | 3900 | 3600 | 4100 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | 4700 | |
| 25 | 4000 | 3800 | 3100 | 3200 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | |
| 26 | 3900 | 2700 | 3200 | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | 3900 | 3100 | 3900 | 2900 | 3900 | 4400 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | |
| 28 | 2100 | 2900 | 2900 | 2900 | 3700 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | |
| 29 | 2100 | 2900 | 2900 | 2900 | 3700 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | 3900 | |
| 30 | 3900 | 2300 | 3100 | 2000 | 3400 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | 3800 | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mean | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Median | | | | | | | | | | | | | | | | | | | | | | | | | | |

For all days of the month

2 For quiet days

E s

November, 1944

RESTRICTED

RECEIVED 12/15/44 S.M.O. M.R.R.

TABLE 34

IONOSPHERE DATA-9

Washington, D.C.

Ionosphere Station

National Bureau of Standards

(Installation)

Hourly values of F2-M1500 ₁₉₄₄ November 4
(Month)S.M.O.
M.R.R.

RESTRICTED

TIME: 75° W MERIDIAN

| Day | 30 | 31 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Day | |
|--------|-------|------------------|--------------------|------------------|--------------------|--------------------|--------------------|-------|-------|-------|-------|-------|--------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|-------|---------|-------|
| 1 | 207 | A | (210) ^F | 204 | 220 | 218 | 210 | 236 | (227) | 237 | 227 | 218 | 222 | 212 | 220 | (229) | (230) | 240 | 230 | 215 | 229 | 212 | 202 | 197 | 50.52 | |
| 2 | 202 | 196 | 201 | 209 ^F | 230 | 238 | 212 | 247 | (240) | (250) | 231 | 227 | 220 | 220 | 215 | (223) | (233) | (243) | 213 | 214 | 235 | 217 | (199) ^F | 194 | 53.12 | |
| 3 | 195 | 190 ^F | 198 ^F | 197 | (202) | 215 | (230) | 245 | 263 | 235 | 222 | (227) | 217 | 221 | 223 | 233 | 230 | 238 | 214 | 215 | 219 | 193 | 195 | 199 | 52.16 | |
| 4 | 190 | 199 | 210 | (205) | (210) ^F | (196) ^F | (195) ^F | 234 | 220 | 217 | 214 | 212 | 212 | 206 | 219 | C | (228) | (231) | C | (210) | (147) | (188) | (185) | (192) | 45.73 | |
| 5 | 192 | (204) | (195) | (200) | 190 | (189) | (220) | C | C | C | C | C | C | C | C | (219) | C | (235) | 219 | (205) | 196 | (204) | (210) | 28.89 | | |
| 6 | (191) | (198) | (204) | 201 | 220 | (219) | (195) | C | C | (215) | C | C | 220 | 220 | 214 | 215 | 227 | 228 | 213 | 219 | (219) | (220) | (215) | 42.82 | | |
| 7 | (192) | (211) | (207) | F | (207) | (212) | (212) | 225 | 245 | (240) | 224 | 230 | 215 | 217 | (220) | C | C | C | C | 237 | 201 | 197 | 209 | 205 | 41.12 | |
| 8 | (185) | (195) | (200) | (210) | (222) | (210) ^F | F | 237 | 267 | 254 | 231 | 229 | 213 | 221 | 230 | 231 | 233 | 251 | 245 | (230) | (218) | (197) | (200) | (202) | 51.16 | |
| 9 | (198) | (205) | (199) | (210) | (200) | (222) | (240) | 241 | 253 | 239 | 244 | 230 | 225 | 230 | (212) | 230 | 239 | 250 | (247) | 225 | (210) | 212 | (218) | (201) | 53.80 | |
| 10 | (198) | (206) | (203) | F | (202) | 214 | 219 | 241 | 255 | 240 | 228 | 213 | (215) | (217) | (235) | (233) | 241 | 255 | 234 | 230 | (230) | (199) | 200 | (195) | 51.06 | |
| 11 | (207) | (221) | (203) | (212) | (206) | (227) | (221) | 243 | 249 | 241 | 245 | 236 | 235 | 223 | 232 | 234 | 244 | 249 | (238) | (247) | 224 | (203) | 207 | 210 | 54.05 | |
| 12 | (194) | 188 ^F | (210) | (212) | (226) | (221) | (218) | 237 | 249 | 241 | 245 | 236 | 235 | 223 | 232 | 233 | 244 | 240 | 244 | (234) | (219) | A | (197) | (197) | 51.41 | |
| 13 | (200) | 199 ^F | (203) | 207 | (208) | (221) | (220) | 241 | (250) | 240 | 263 | 250 | 225 | 239 | 237 | 244 | 239 | 254 | (244) | 211 | (229) | 226 | 201 | (208) | 54.59 | |
| 14 | 208 | 201 | 205 | 223 | 218 | 222 | 225 | 241 | 248 | 256 | (241) | 225 | (230) | 224 | 221 | 222 | 245 | 250 | 225 | 212 | 214 | 222 | 198 | 200 | 53.79 | |
| 15 | (204) | (201) | 214 | 210 | 220 | 250 | 230 | 235 | 235 | 234 | 241 | 221 | 240 | (214) ^M | 231 | 234 | 227 | 245 | 234 | 242 | (259) | (204) | (186) | 194 | 53.85 | |
| 16 | 200 | 196 | 200 | 206 | 209 | 208 | 229 | 237 | 234 | 243 | 225 | 227 | (211) ^M | 220 | 231 | 237 | 260 | 243 | 227 | 227 | 221 | 216 | 207 | 195 | 53.09 | |
| 17 | 200 | 203 | 203 | 211 | 218 | 224 | 227 | 237 | 256 | 236 | (235) | (220) | (240) | (223) | 220 | 235 | 253 | 252 | (243) | 213 | 213 | 217 | 210 | 220 | 54.09 | |
| 18 | 195 | 190 | 225 | 217 | 222 | 227 | 222 | 230 | (255) | 257 | 245 | 242 | 223 | 218 | 239 | 240 | 230 | 245 | 241 | 217 | 224 | 195 | 210 | 192 | 54.01 | |
| 19 | 184 | 208 | 205 | 210 | 214 | 234 | 220 | 240 | (224) | 240 | (242) | 230 | 220 | (225) | 241 | (257) | (233) | 249 | 250 | 226 | 220 | 203 | 205 | 210 | 53.70 | |
| 20 | 199 | 200 | 217 | 220 | 232 | (250) ^F | 219 | 220 | (243) | (235) | (222) | (227) | C | C | C | C | C | C | C | C | C | C | C | C | 26.84 | |
| 21 | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | 6.62 | |
| 22 | (220) | (245) | (224) | 210 | 219 | 216 | 215 | 248 | 244 | C | C | C | 231 | C | 236 | 234 | 237 | 231 | 210 | 209 | (217) | (226) | (207) | (200) | 44.77 | |
| 23 | (200) | 194 | 198 | 210 | 206 | 224 | (213) | 229 | 229 | 241 | 236 | 243 | 220 | 220 | 227 | 245 | 243 | 238 | 220 | (214) | (225) | (200) | A | 195 | 50.73 | |
| 24 | 202 | 203 | (201) | 195 | (197) | 221 | 204 | 238 | 257 | 230 | 263 | 245 | (240) | 241 | 238 | (248) | 250 | 220 | (230) | (215) | (218) | A | 192 | 195 | 51.43 | |
| 25 | 198 | 200 | (198) | (220) | (221) | 215 | 211 | 229 | 252 | 248 | 232 | 232 | 235 | C | C | 245 | 253 | 241 | (218) | 214 | 208 | 195 | 197 | 197 | 48.59 | |
| 26 | (198) | (204) | (198) | 219 | (238) | 224 | 215 | 230 | (246) | 235 | 240 | 231 | 243 | 236 | 240 | 226 | 233 | 250 | 230 | (218) | (201) | 198 | (195) | 185 | 53.33 | |
| 27 | (201) | 207 | 198 | 222 | 224 | 219 | 197 | 242 | 242 | 258 | 234 | 230 | (233) | C | C | 240 | 226 | 228 | 215 | (210) | 201 | 208 | 207 | (203) | 48.45 | |
| 28 | 194 | 200 | 207 | 211 | (219) | 248 | 215 | 230 | 231 | 240 | (250) | (235) | 243 | 232 | 229 | 232 | 232 | 232 | 217 | 212 | 245 | (220) | 208 | 211 | (188) | 53.49 |
| 29 | 198 | 189 | 196 | 211 | 221 | 231 | (207) | 244 | 243 | 240 | (250) | 225 | 218 | 216 | 238 | 241 | 242 | 232 | (230) | 217 | 217 | (219) | (202) | (194) | 53.17 | |
| 30 | (212) | (210) | (207) | (193) | (208) | (210) | (208) | (225) | (245) | 237 | (229) | 222 | 222 | 217 | 231 | 222 | 244 | (230) | (211) | (235) | (237) | (204) | (201) | (201) | 52.60 | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | 5792 | 5663 | 5933 | 5648 | 6229 | 6425 | 6049 | 6382 | 6595 | 6483 | 6156 | 5944 | 6114 | 5325 | 5707 | 6065 | 6196 | 6485 | 5888 | 6001 | 6115 | 5527 | 5691 | 5824 | 1442.77 | |
| Mean | 200 | 202 | 204 | 209 | 215 | 222 | 216 | 236 | 244 | 240 | 237 | 229 | 226 | 222 | 228 | 233 | 238 | 240 | 226 | 222 | 218 | 206 | 203 | 201 | | |
| Median | 200 | 202 | 204 | 209 | 215 | 222 | 216 | 236 | 244 | 240 | 237 | 229 | 226 | 222 | 228 | 233 | 238 | 240 | 226 | 222 | 218 | 206 | 203 | 201 | | |

For all days of the month

2 For quiet days

F2-M1500

November, 1944

TABLE 35

IONOSPHERE DATA-10

Washington, D. C.

Ionosphere Station

National Bureau of Standards

Hourly values of

F2-M3000 for November 1944

(Months)

S.M.O.
M.R.R.

RESTRICTED

TIME: 75° W MERIDIAN

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 1 | 307F | A | 309F | 300 | 324 | 324 | 311 | 345 | (333) | 346 | 331 | 320 | 330 | 316 | 330 | (333) | (339) | 345 | 335 | 318 | 332 | 324 | 305 | 295 | 7452 | |
| 2 | 302 | 299 | 306 | 309F | 332 | 344 | 317 | 350 | (350) | (358) | 340 | 330 | 322 | 325 | 323 | (325) | (340) | (345) | 320 | 315 | (348) | 317 | (298) | (290) | 7805 | |
| 3 | 291F | 280F | 300F | 295 | (296) | 320 | (333) | 350 | 373 | 345 | 325 | (330) | 325 | 329 | 327 | 339 | 333 | 340 | 313 | 319 | 323 | 291 | 292 | 300 | 7679 | |
| 4 | 290 | 300 | 311 | (311) | (306) | (291) | (293) | 341 | 321 | 324 | 317 | 320 | 321 | 312 | 321 | C | (335) | (339) | C | (314) | (295) | (283) | (283) | (290) | 6818 | |
| 5 | 290 | (310) | (298) | (295) | 289 | (280) | (325) | C | C | C | C | C | C | C | C | (325) | C | (343) | (315) | (307) | 299 | (310) | (313) | 4299 | | |
| 6 | (320) | (287) | (310) | 305 | 325 | (328) | (287) | C | C | (320) | C | C | 325 | 325 | 318 | 321 | 335 | 336 | 317 | 330F | (311) | (295) | (320) | (322) | 6337 | |
| 7 | (285) | (316) | (302) | F | (302) | (308) | (315) | 330 | 350 | (345) | 332 | 340 | 325 | 321 | (321) | C | C | C | C | 340 | 301 | 298F | 310 | 310F | 6051 | |
| 8 | (280) | (297) | (300) | (310) | (327) | (310) | F | 348F | 370 | 369 | 335 | 337 | 319 | 327 | 338 | 335 | 339 | 362 | 347 | (332) | (311) | (297) | (300) | (303) | 7493 | |
| 9 | (299) | (304) | (294) | (310) | (300) | (324) | (345) | 350 | 361 | 346 | 356 | 337 | 335 | 345 | (315) | 335 | 348 | 361 | (350) | 322F | (311) | (313) | (320) | (301) | 7882 | |
| 10 | (297) | (310) | (302) | F | (300) | 321 | 324 | 343 | 368 | 350 | 332 | 319 | (337) | (335) | (342) | (340) | 347 | 365 | 346F | 328F | (335) | (299) | (301) | (287) | 7527 | |
| 11 | (310) | (330) | (318) | 309F | (307) | (335) | (330) | 340 | 351 | 343 | 350 | 325 | 349 | 320 | 338 | 340 | 350 | 356 | (343) | (350) | 328F | (304) | 307F | 311F | 7944 | |
| 12 | (287) | 287F | (310) | (307) | (331) | (321) | (319) | 348 | 360 | 350 | 353 | 342 | 342 | 325 | 342 | 340 | 351 | 344 | 300F | (337) | (321) | A | (294) | (293) | 7506 | |
| 13 | (299) | 300F | (300) | 315F | (311) | (324) | (328) | 347 | (368) | 341 | 373 | 356 | 330 | 347 | 340 | 350 | 342 | 370 | (345) | 318F | (335) | 328F | (308) | (315) | 7990 | |
| 14 | 312F | 308F | 310F | 321 | 326F | 335F | 335 | 347 | 355 | 362 | (348) | 322 | (340) | 332 | 322 | 325 | 350 | 355 | 330 | 324 | 320 | 325 | 300F | 301F | 7905 | |
| 15 | (303) | (309) | 314F | 314 | 325 | 341 | 335 | 340 | 342 | 340 | 347 | 322 | 346 | (313) | 335 | 340 | 325 | 350 | 335 | 354 | (343) | (310) | (279) | 292 | 7874 | |
| 16 | 300F | 301F | 300 | 310F | 318 | 313 | 334 | 342 | 342 | 348 | 330 | 332 | (317) | 325 | 340 | 341 | 371 | 349 | 330 | 332 | 330 | 323 | 307 | 295 | 7830 | |
| 17 | 305 | 302F | 310 | 315 | 316F | 332 | 330 | 346 | 368 | 340 | (339) | (322) | (342) | (329) | 325 | 343 | 362 | 359 | 342F | 319 | 320 | 320 | 311 | 323F | 7920 | |
| 18 | 295F | 290 | 330 | 321 | 330 | 330 | 330 | 330 | (365) | 359 | 352 | 350 | 326 | 325 | 343 | 341 | 340 | 355 | 348 | 325 | 324 | 286 | 311 | 290 | 7893 | |
| 19 | 290 | 307 | 311 | 310 | 320 | 330 | 325 | 349 | (340) | 344 | (352) | 332 | 321 | 330 | 348 | 342 | (342) | 352 | 331 | 337 | 320 | 307 | 310F | 313 | 7863 | |
| 20 | 298F | 300F | 323F | 325F | 340 | (346) | 324 | 325 | (345) | (343) | (325) | (343) | C | C | C | C | C | C | C | C | C | C | C | C | 3955 | |
| 21 | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | (325) | 322F | (321) | 968 | | |
| 22 | (320) | (355) | (330) | 315F | 325F | 321 | 320 | 352 | 345 | C | C | C | 340 | C | 340 | 340 | 342 | 337 | 314F | 309F | (322) | (317) | (314) | (308) | 6566 | |
| 23 | (300) | 297 | 301 | 317F | 310F | 332F | (320) | 333F | 332 | 347 | 343 | 352 | 325 | 320 | 329 | 350 | 346 | 346 | 324 | (320) | (330) | (309) | A | 292F | 7476 | |
| 24 | 302F | 310F | (303) | 290F | (290) | 325F | 309F | 345F | 360 | 337 | 343 | 352 | (348) | 347 | 347 | 350 | 360 | 323 | (327) | (320) | (330) | A | 289F | 292F | 7539 | |
| 25 | 300F | 302F | (299) | (320) | (330) | 323F | 314F | 338F | 361 | 355 | 341 | 340 | 346 | C | C | 355 | 359 | 350 | (327) | (320) | 317F | 295F | 300F | 298F | 7188 | |
| 26 | (298) | (310) | (300) | 329F | (350) | 330F | 315F | 335F | (360) | 345 | 341 | 340 | 341 | 335 | 346 | 337 | 344 | 360 | 335 | (320) | (300) | 300 | (294) | 285F | 7855 | |
| 27 | (303) | 311F | 290F | 331 | 330 | 330 | 325 | 298F | 347 | 362 | 341 | 330 | (338) | C | C | 345 | 331 | 351 | (320) | (311) | 304F | 305F | 307F | (309) | 7117 | |
| 28 | 294F | 299F | 309F | 319F | (321) | 359 | 319F | 345 | 340 | 347 | (359) | (345) | 350 | (337) | 335 | 337 | 345 | 322 | 324 | 355 | (319) | 310 | 304F | (286) | 7880 | |
| 29 | 300F | 284F | 299F | 314F | 338 | 341 | (315) | (354) | 354 | 345 | (352) | 335 | 321 | 320 | 347 | 360 | 347 | 330 | (324) | 322 | 325 | (321) | (301) | (288) | 7837 | |
| 30 | (321) | (320) | (301) | (294) | (314) | (316) | (311) | (333) | (360) | 342 | (337) | 320 | 325 | 322 | 329 | 330 | 356 | 337 | (310) | (339) | (345) | (310) | (310) | 7782 | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | 8698 | 8525 | 8890 | 8411 | 9243 | 9467 | 8961 | 9256 | 9521 | 9353 | 8897 | 8693 | 8986 | 7862 | 8381 | 8817 | 8979 | 9362 | 8552 | 8828 | 9427 | 8310 | 8509 | 8723 | 2122 | 31 |
| Mean | 300 | 304 | 306 | 312 | 319 | 326 | 320 | 343 | 353 | 346 | 342 | 334 | 333 | 328 | 335 | 339 | 345 | 347 | 329 | 327 | 322 | 308 | 304 | 301 | | |
| Median | 300 | 304 | 306 | 312 | 319 | 326 | 320 | 343 | 353 | 346 | 342 | 334 | 333 | 328 | 335 | 339 | 345 | 347 | 329 | 327 | 322 | 308 | 304 | 301 | | |

1 For all days of the month

2 For quiet days

F2-M3000

November, 1944

Washington, D. C.

Ionosphere Station

IONOSPHERE DATA-II

TABLE 36

RESTRICTED

S.M.O.
M.R.R.Hourly values of F2-M3500 for November 4, 1944
(Month)National Bureau Of Standards
(Institution)

TIME: 75° W. MERIDIAN

| TIME: 15° W MERIDIAN | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean |
| 1 | 327F | A | (331)F | 322 | 343 | 342 | 330 | 359 | (350) | 365 | 345 | 331 | 348 | 332 | 350 | (347) | (351) | 340 | 350 | 334 | 350 | 344 | 340 | 313 | 7843 | |
| 2 | 320 | 319 | 326 | 330F | 345 | 340 | 338 | 348 | (370) | (371) | 355 | 347 | 340 | 343 | 339 | (344) | (354) | (361) | 335 | 330 | (364) | 335 | (348) | 314 | 8226 | |
| 3 | 318F | 302F | 320F | 312 | (323)F | 335 | (350)F | 366 | 380 | 360 | 340 | (341) | 340 | 346 | 347 | 355 | 347 | 355 | 332 | 338 | 341 | 336 | 312 | 8099 | | |
| 4 | 315 | 320 | 330 | 329F | (330)F | (311)F | (312)F | 360 | 343 | 343 | 333 | 335 | 339 | 331 | 343 | C | (350) | (352) | (311) | (334) | (315) | (315) | (311) | 7646 | | |
| 5 | 310 | (330) | (312) | (318) | 310 | (308) | (345) | C | C | C | C | C | C | C | C | (344) | C | (360) | (330) | C | (323) | 335 | (322) | 722 | | |
| 6 | 347 | 304 | 330 | 321 | 343 | (341) | 310 | C | C | (341) | C | C | 342 | 340 | 330 | 339 | 350 | 349 | 340 | 347 | (330) | (340) | (344) | 6495 | | |
| 7 | 300F | 335F | 323F | F | (322)F | 334F | (330)F | 351 | 365 | (359) | 350 | 355 | 340 | 340 | (344) | C | C | C | C | 354 | 321 | 319 | 329 | 330F | 401 | |
| 8 | (300)F | (315) | (322)F | (330)F | (342)F | 330F | F | 360F | 388 | 381 | 350 | 352 | 334 | 347 | 351 | 350 | 353 | 375 | 364F | (350)F | (331)F | (319)F | (325) | 7589 | | |
| 9 | 319F | 320F | 316F | (330)F | (321)F | 348F | 340F | 370 | 380 | 360 | 370 | 350 | 350 | (358) | (332) | 350 | 365 | 376 | (372) | 343F | (335)F | (345)F | (32) | 5330 | | |
| 10 | (319)F | (329)F | 320F | F | 321F | 340 | 348 | 320 | 379 | 369 | 348 | 339 | (346) | (350) | (345) | (352) | 360 | 380 | 362F | 348F | (357)F | (344)F | (310)F | 7129 | | |
| 11 | (329)F | (347)F | 330F | 329F | 324F | (350) | (350)F | 360 | 367 | 362 | 370 | 343 | 362 | 335 | 350 | 355 | 365 | 375 | (360)F | (371)F | 348F | (323)F | 329F | 334F | 8368 | |
| 12 | 306F | 317F | (328)F | (322)F | 359F | (345)F | 341F | 365 | 374 | 370 | 365 | 352 | 360 | 347 | 358 | 354 | 369 | 360 | 319F | (355)F | (340)F | A | (320) | (315) | 7945 | |
| 13 | 320F | 320F | 321F | 330F | (329)F | (343)F | (346)F | 370 | (380) | 359 | 385 | 374 | 348 | 363 | 355 | 366 | 359 | 382 | (340)F | 335F | (355)F | 350F | 323F | (330)F | 8407 | |
| 14 | 330F | 325F | 329F | 341 | 344F | 349F | 352 | 360 | 370 | 375 | (368) | 340 | (358) | 350 | 340 | 345 | 367 | 370 | 344 | 342 | 338 | 340 | 320F | (320)F | 5317 | |
| 15 | (322)F | (320)F | 333F | 335 | 346 | 381 | 350 | 354 | 360 | 360 | 360 | 338 | 362 | (331)F | 355 | 354 | 335 | 363 | 350 | 371 | (360) | (325) | (300) | 310 | 5287 | |
| 16 | 320F | 322F | 319 | 327F | 334 | 330 | 348 | 354 | 356 | 362 | 344 | 349 | (336)F | 341 | 355 | 360 | 385 | 363 | 345 | 349 | 349 | 340 | 325 | 315 | 5228 | |
| 17 | 321 | 320F | 329 | 332 | 331F | 348 | 347 | 360 | 380 | 355 | (350) | (340) | (351) | (347) | 340 | 364 | 376 | 374 | (358)F | 334 | 336 | 340 | 326 | 340F | 5304 | |
| 18 | 317F | 310 | 350 | 340 | 348 | 344 | 349 | 350 | (380) | 370 | 370 | 367 | 345 | 343 | 358 | 354 | 359 | 369 | 370 | 343 | 352 | 311 | 330 | 310 | 5339 | |
| 19 | 312 | 329 | 329 | 330 | 340 | 345 | 341 | 362 | (355)F | 358 | (368) | 352 | 340 | (345) | 365 | (355) | (362) | 365 | 350 | 353 | 340 | 324 | 330F | 330 | 5280 | |
| 20 | 320F | (320)F | 342F | 342F | 360 | (378)F | 340 | 343 | (360) | (360) | (348) | (360) | C | C | C | C | C | C | C | C | C | C | C | C | 4173 | |
| 21 | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | 1035 | |
| 22 | (343)F | (374) | (349)F | 330F | 345F | 342 | 340 | 370 | 366 | C | C | C | 357 | C | 360 | 353 | 362 | 350F | 328F | 324F | (339)F | (335)F | (330)F | 6932 | | |
| 23 | (318)F | 314 | 321 | 332F | 328F | 348F | (343)F | 350F | 349 | 360 | 362 | 369 | 341 | 340 | 344 | 370 | 363 | 361 | 338 | (339) | (344) | (325) | A | 321F | 7885 | |
| 24 | 325F | 324F | (327)F | 310F | (368)F | 345F | 330F | 360F | 375 | 350 | 354 | 368 | (344) | 367 | 368 | (365) | 374 | 342 | (348)F | (339)F | (346) | A | 310F | 311F | 7970 | |
| 25 | 321F | 330 | (320)F | (342)F | (350)F | 344F | 330F | 340F | 375 | 367 | 355 | 354 | (359) | C | C | 373 | 375 | 370 | (345)F | 341F | 339F | 317F | 321F | 319F | 7587 | |
| 26 | (321)F | (332)F | 320F | 341F | (370)F | 349F | 333F | 352F | (375) | 361 | 365 | 354 | 360 | 349 | 360 | 355 | 360 | 370 | 348 | (348)F | (318) | 317 | (316)F | 344F | 8278 | |
| 27 | (323)F | 334F | 320F | 350 | 350 | 343 | 317F | 368F | 367 | 381 | 360 | 347 | (360) | C | C | 360 | 348 | 347 | 340F | (340)F | 328F | 323F | 329F | (324)F | 7559 | |
| 28 | 315F | 319F | 323F | 332F | (340)F | 372 | 340F | 352 | 354 | 360 | (372) | (360) | 369 | (350) | 349 | 353 | 358 | 346 | 343 | 375 | (342)F | 328 | 326F | (309)F | 8287 | |
| 29 | 320F | 305F | 311F | 331F | 347 | 357 | (330)F | 370F | 366 | 356 | (372) | 346 | 338 | 340 | 362 | 373 | 368 | 349 | (348)F | 341 | 342 | (342)F | (323)F | (308)F | 8245 | |
| 30 | (342)F | (340)F | (322)F | (317) | (335)F | (333)F | (325)F | (350)F | (376) | 362 | (362) | 339 | 343 | 342 | 346 | 348 | 369 | (354)F | (329)F | (359)F | (341)F | (345)F | (328)F | (320)F | 8247 | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | 9298 | 9088 | 9453 | 8908 | 9848 | 9995 | 9475 | 9684 | 9940 | 9776 | 9321 | 9112 | 9437 | 8277 | 8766 | 9238 | 9384 | 9778 | 9012 | 9337 | 9548 | 8846 | 9047 | 9309 | 233897 | |
| Mean | 321 | 324 | 326 | 330 | 340 | 345 | 338 | 359 | 368 | 362 | 358 | 350 | 350 | 345 | 351 | 355 | 361 | 362 | 347 | 346 | 341 | 328 | 324 | 321 | | |
| Median | 321 | 324 | 326 | 330 | 340 | 345 | 338 | 359 | 368 | 362 | 358 | 350 | 350 | 345 | 351 | 355 | 361 | 362 | 347 | 346 | 341 | 328 | 324 | 321 | | |

¹ For all days of the month² For quiet days

F2-M3500

November, 1944

Washington, D.C.

Ionosphere Station

TABLE 37

IONOSPHERE DATA-12

National Bureau of Standards

Hourly values of F1-M3000 for November 1944
(Month)RECORDS DELETED BY: S.M.O.
M.R.R.

RESTRICTED

TIME: 75° W MERIDIAN

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean | |
|-------------------|----|----|----|----|----|----|----|----|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|----|----|----|----|----|----|----|--------|------|--|
| 1 | | | | | | | | | | (370) | (384) | (370) | | | | | | | | | | | | | 11.24 | | |
| 2 | | | | | | | | | (373) ^m | 3.72 | 3.66 | 3.68 | | | | | | | | | | | | | 14.79 | | |
| 3 | | | | | | | | | | H | (370) | (371) | | | | | | | | | | | | | 3.71 | | |
| 4 | | | | | | | | | (363) | 3.60 | 3.57 | 3.53 | 3.48 | | (3.70) | C | C | | | | | | | | 21.51 | | |
| 5 | | | | | | | | | C | C | C | C | C | | C | C | C | | | | | | | | | | |
| 6 | | | | | | | | | C | C | C | C | C | | 3.81 | 3.52 | (3.60) | C | | | | | | | 10.93 | | |
| 7 | | | | | | | | | | (3.75) | (3.80) | | | | | C | C | | | | | | | | 7.55 | | |
| 8 | | | | | | | | | A | (3.84) | (3.80) | 3.80 | H | | | A | A | | | | | | | | 11.44 | | |
| 9 | | | | | | | | | 4.05 | 4.00 | (370) | 3.80 | | H | | | | | | | | | | | 15.55 | | |
| 10 | | | | | | | | | 3.98 | (4.00) | | | | | | | | | | | | | | | 7.98 | | |
| 11 | | | | | | | | | | (4.00) | | 3.84 | 3.63 | (3.61) | | 3.89 | | | | | | | | | 18.47 | | |
| 12 | | | | | | | | | | | (3.90) | (3.95) | | 3.75 | | | | | | | | | | | 3.75 | | |
| 13 | | | | | | | | | | | | 3.70 | (371) | | | | | | | | | | | | 7.85 | | |
| 14 | | | | | | | | | | | H | 3.70 | (374) | | (3.42) | (3.72) | | | | | | | | | 7.41 | | |
| 15 | | | | | | | | | | 3.99 | | (374) | | | | | | | | | | | | | 7.73 | | |
| 16 | | | | | | | | | 3.97 | | | 3.75 | 3.89 | | | | | | | | | | | | 11.61 | | |
| 17 | | | | | | | | | | | | 3.90 | (3.60) | | | | | | | | | | | | 7.50 | | |
| 18 | | | | | | | | | | 3.89 | | H | | | 3.90 | | | | | | | | | | 7.79 | | |
| 19 | | | | | | | | | | | (3.73) | C | C | C | C | C | C | | | | | | | | 3.73 | | |
| 20 | | | | | | | | | | | C | C | C | C | C | C | C | | | | | | | | | | |
| 21 | | | | | | | | | C | C | C | C | C | C | 3.79 | | C | | | | | | | | 3.79 | | |
| 22 | | | | | | | | | | C | C | C | C | C | | | | | | | | | | | 7.37 | | |
| 23 | | | | | | | | | | C | (3.69) | (3.68) | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | A | A | A | A | C | A | | | | | | | | | 3.64 | | |
| 25 | | | | | | | | | | | (3.70) | | (3.64) | C | | | | | | | | | | | 3.90 | | |
| 26 | | | | | | | | | | | | | | C | C | 3.62 | | | | | | | | | 7.72 | | |
| 27 | | | | | | | | | | A | 4.10 | | | | | | | | | | | | | | 7.68 | | |
| 28 | | | | | | | | | | (3.94) | | | | (3.74) | | | | | | | | | | | 11.11 | | |
| 29 | | | | | | | | | | 3.79 | | 3.62 | | 3.70 | | | | | | | | | | | 3.78 | | |
| 30 | | | | | | | | | | | 3.78 | | | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | | | | | | | | | 76.8 | 42.59 | 49.65 | 44.90 | 40.97 | 22.22 | 18.33 | 14.87 | | | | | | | | | 2411.1 | | |
| Mean ¹ | | | | | | | | | 3.84 | 3.87 | 3.81 | 3.74 | 3.72 | 3.70 | 3.67 | 3.72 | | | | | | | | | | | |
| Median | | | | | | | | | 3.84 | 3.87 | 3.81 | 3.74 | 3.72 | 3.70 | 3.67 | 3.72 | | | | | | | | | | | |

¹ For all days of the month

2 For quiet days

FI-M3000

November, 1944

Washington, D.C.

Ionosphere Station

National Bureau Of Standards
(Institution)

TABLE 38

IONOSPHERE DATA-13

Hourly values of E-M1500 for November 1944
(Month)

RESTRICTED

RECEIVED 14 NOV 1944
U.S.S.M.O.
M.R.R.

TIME: 75° W MERIDIAN

| TIME TO 10 MILESTONES | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|----|----|----|----|----|----|----|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|----|----|----|----|----|--------|------|--|
| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Sum | Mean | |
| 1 | | | | | | | | A | A | A | 3.74 | 3.89 | 3.70 | (3.95) | 3.84 | 4.00 | (3.70) | | | | | | | | 27.02 | | |
| 2 | | | | | | | | | (3.44) | (3.30) | 3.50 | (3.84) | 3.40 | (3.82) | 3.91 | A | (3.67) | A | | | | | | | 29.38 | | |
| 3 | | | | | | | | | 3.90 | (3.81) | 3.77 | 3.60 | (3.70) | 3.85 | 3.95 | (3.89) | A | | | | | | | | 30.47 | | |
| 4 | | | | | | | | | 3.98 | (3.62) | 3.95 | 3.71 | 3.72 | 3.76 | 3.91 | C | C | C | | | | | | | 26.65 | | |
| 5 | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | | | | | | | 11.55 | | |
| 6 | | | | | | | | C | C | C | C | C | C | (3.82) | A | 3.83 | (3.90) | | | | | | | | 15.34 | | |
| 7 | | | | | | | | | A | 4.00 | A | A | 3.72 | 3.84 | 3.78 | C | C | C | | | | | | | 22.81 | | |
| 8 | | | | | | | | | A | A | 3.89 | 3.88 | 3.76 | 3.60 | (3.78) | (3.90) | A | | | | | | | | 26.84 | | |
| 9 | | | | | | | | | (3.90) | (3.72) | 3.75 | (3.80) | 3.45 | (3.91) | (3.81) | A | A | A | | | | | | | 22.88 | | |
| 10 | | | | | | | | | 3.55 | 3.70 | 3.71 | 3.75 | 3.84 | 3.52 | (3.74) | (3.80) | (3.95) | F | | | | | | | 22.80 | | |
| 11 | | | | | | | | | A | A | 3.75 | (3.70) | (3.96) | (3.80) | (3.79) | 3.78 | A | A | | | | | | | 18.92 | | |
| 12 | | | | | | | | | A | A | (3.76) | (3.70) | (3.91) | (3.67) | (3.79) | A | A | (3.86) | F | | | | | | 22.97 | | |
| 13 | | | | | | | | | (3.50) | 3.70 | (3.90) | (4.00) | 3.80 | A | A | A | (3.90) | | | | | | | | 15.27 | | |
| 14 | | | | | | | | A | A | A | A | A | 3.89 | 3.70 | (3.88) | A | 3.80 | | | | | | | | 33.71 | | |
| 15 | | | | | | | | | 3.72 | 3.70 | (3.72) | 3.56 | 3.81 | 3.80 | 3.84 | 3.92 | (3.66) | | | | | | | | 33.87 | | |
| 16 | | | | | | | | A | 3.64 | 3.78 | 3.89 | 3.75 | 3.77 | 3.80 | 3.73 | (3.80) | 3.71 | | | | | | | | 33.64 | | |
| 17 | | | | | | | | | (3.65) | (3.55) | 3.75 | (3.90) | 3.85 | 3.68 | 3.93 | (3.80) | (3.53) | | | | | | | | 34.54 | | |
| 18 | | | | | | | | | 3.80 | 3.76 | (3.81) | 3.91 | 3.84 | 3.80 | 3.78 | (3.94) | (3.90) | | | | | | | | 15.29 | | |
| 19 | | | | | | | | | 3.83 | (3.92) | (3.82) | (3.72) | C | C | C | C | C | C | | | | | | | | | |
| 20 | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | | | | | | | | | |
| 21 | | | | | | | | | 3.71 | C | C | C | C | C | (3.90) | A | (3.68) | | | | | | | | 15.39 | | |
| 22 | | | | | | | | | A | (3.73) | A | 3.85 | 3.89 | (3.84) | A | A | A | | | | | | | | 15.31 | | |
| 23 | | | | | | | | | A | A | A | (3.60) | 3.77 | 3.71 | (3.90) | A | A | A | | | | | | | 14.98 | | |
| 24 | | | | | | | | | F | 3.68 | 3.70 | (3.75) | A | F | C | A | (3.88) | | | | | | | | 15.01 | | |
| 25 | | | | | | | | | F | F | A | (3.60) | (3.80) | (3.50) | 3.60 | (3.75) | 3.60 | | | | | | | | 25.65 | | |
| 26 | | | | | | | | | H | A | A | (3.70) | A | C | C | (3.80) | 3.83 | | | | | | | | 11.33 | | |
| 27 | | | | | | | | | F | F | (3.60) | (3.68) | 3.62 | 3.90 | 3.78 | 3.70 | (3.60) | F | | | | | | | 25.88 | | |
| 28 | | | | | | | | | F | A | A | A | A | A | C | 3.62 | A | | | | | | | | 3.62 | | |
| 29 | | | | | | | | | F | A | (3.70) | 3.79 | A | 3.67 | 3.78 | A | A | | | | | | | | 14.94 | | |
| 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum | | | | | | | | | 44.62 | 55.92 | 75.11 | 86.98 | 84.23 | 78.82 | 80.24 | 53.53 | 60.17 | | | | | | | | 619.62 | | |
| Mean | | | | | | | | | 3.72 | 3.73 | 3.76 | 3.78 | 3.83 | 3.75 | 3.82 | 3.82 | 3.76 | | | | | | | | | | |
| Median | | | | | | | | | 3.72 | 3.73 | 3.76 | 3.78 | 3.83 | 3.75 | 3.82 | 3.82 | 3.76 | | | | | | | | | | |

1 For all days of the month

2 For quiet days

E-M1500

November, 1944

Table 39

Ionospheric Storminess, November, 1944

| Day | Ionospheric Character* | | Principal Storms ¹ | | Magnetic Character** | |
|----------|------------------------|-----------|-------------------------------|---------|----------------------|-----------|
| | 00-12 GCT | 12-24 GCT | Beginning GCT | End GCT | 00-12 GCT | 12-24 GCT |
| November | | | | | | |
| 1 | 2 | 2 | | | 0 | 1 |
| 2 | 1 | 2 | | | 1 | 0 |
| 3 | 2 | 2 | | | 1 | 2 |
| 4 | 3 | 3 | | | 3 | 2 |
| 5 | 2 | *** | | | 3 | 3 |
| 6 | 2 | 3 | | | 3 | 1 |
| 7 | 3 | 2 | | | 1 | 2 |
| 8 | 2 | 3 | | | 2 | 0 |
| 9 | 3 | 1 | | | 2 | 1 |
| 10 | 3 | 1 | | | 1 | 2 |
| 11 | 2 | 1 | | | 1 | 1 |
| 12 | 2 | 2 | | | 1 | 0 |
| 13 | 3 | 2 | | | 0 | 0 |
| 14 | 2 | 1 | | | 1 | 1 |
| 15 | 2 | 2 | | | 1 | 0 |
| 16 | 2 | 2 | | | 2 | 1 |
| 17 | 1 | 2 | | | 0 | 1 |
| 18 | 1 | 1 | | | 2 | 2 |
| 19 | 1 | 1 | | | 3 | 1 |
| 20 | 1 | *** | | | 3 | 3 |
| 21 | *** | *** | | | 1 | 0 |
| 22 | 1 | 2 | | | 0 | 1 |
| 23 | 1 | 1 | | | 1 | 1 |
| 24 | 3 | 3 | | | 1 | 0 |
| 25 | 2 | 2 | | | 0 | 1 |
| 26 | 2 | 2 | | | 2 | 1 |
| 27 | 2 | 1 | | | 1 | 1 |
| 28 | 3 | 2 | | | 1 | 1 |
| 29 | 2 | 2 | | | 1 | 1 |
| 30 | 2 | 2 | | | 1 | 2 |

*Ionosphere character figure (I-figure) for ionospheric storminess at Washington, D.C., during 12-hour period, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

**Average for 12 hours of American magnetic K-figure, determined by a number of observatories, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

***No record.

1/No major disturbances were observed at Washington, D.C., during November, 1944.

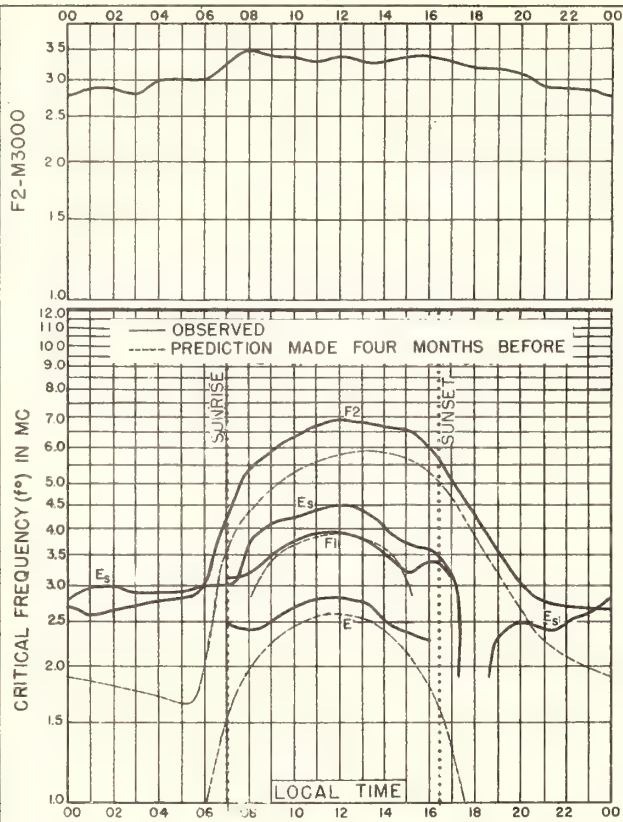


Fig. 1. OTTAWA, CANADA
45.5°N, 75.8°W
NOVEMBER, 1944

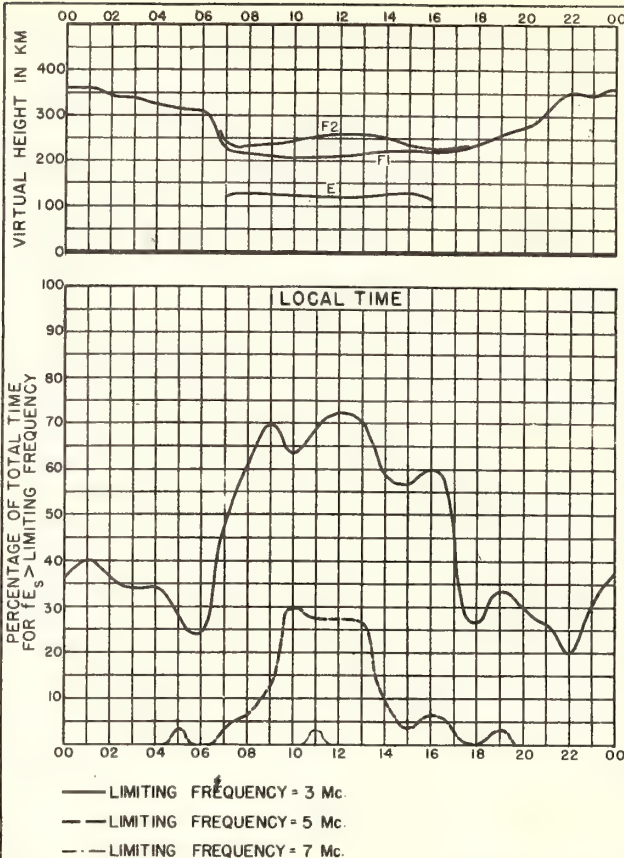


Fig. 2. OTTAWA, CANADA
NOVEMBER, 1944

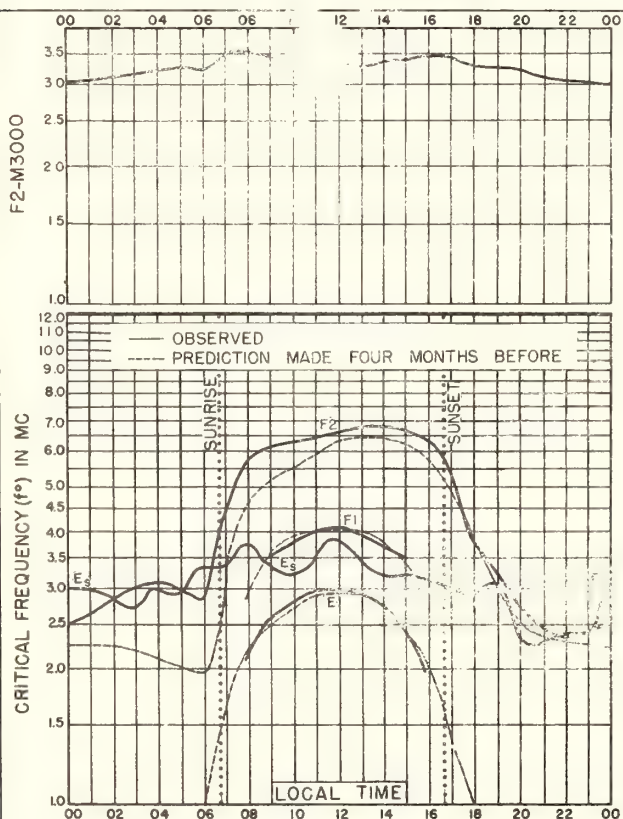


Fig. 3. WASHINGTON, D.C.
39.0°N, 77.5°W
NOVEMBER, 1944

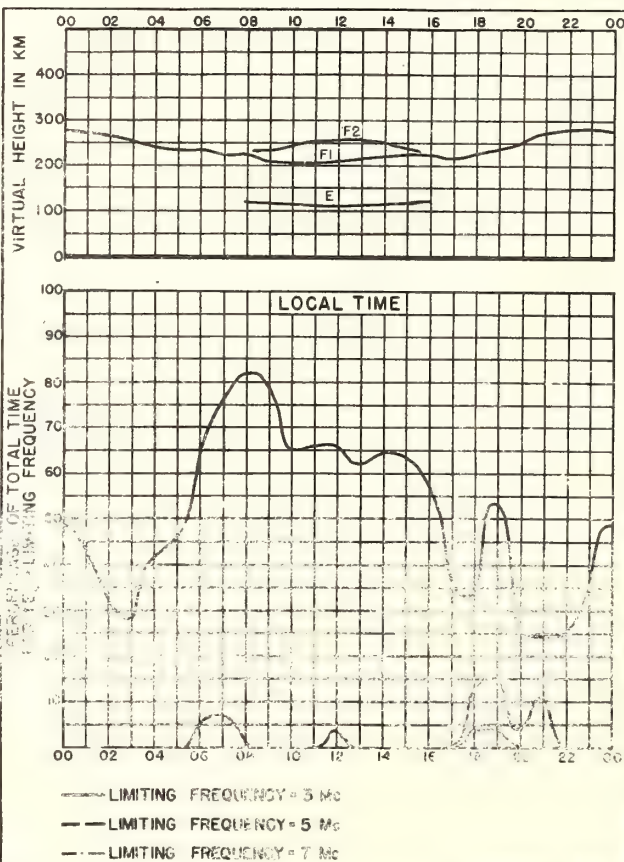


Fig. 4. WASHINGTON, D.C.
NOVEMBER, 1944

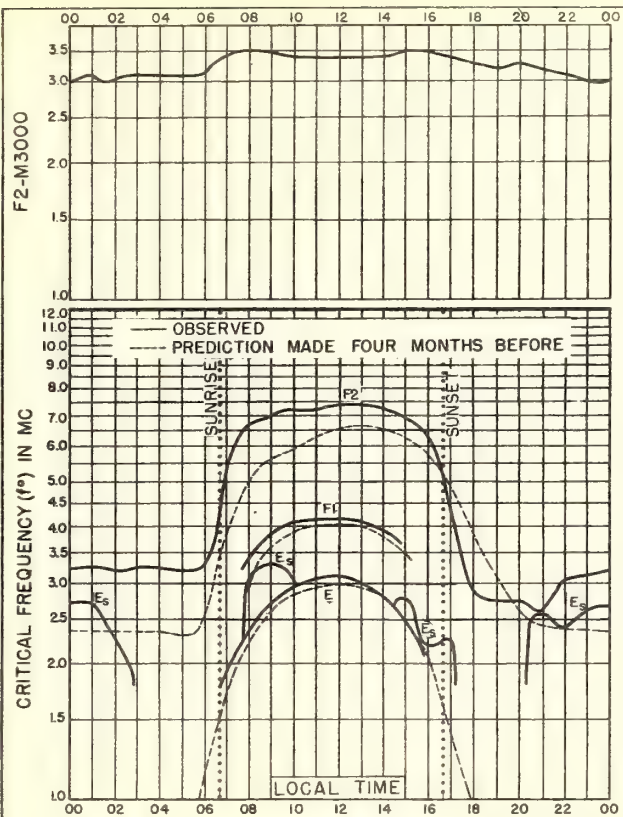


Fig. 5. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W
NOVEMBER, 1944

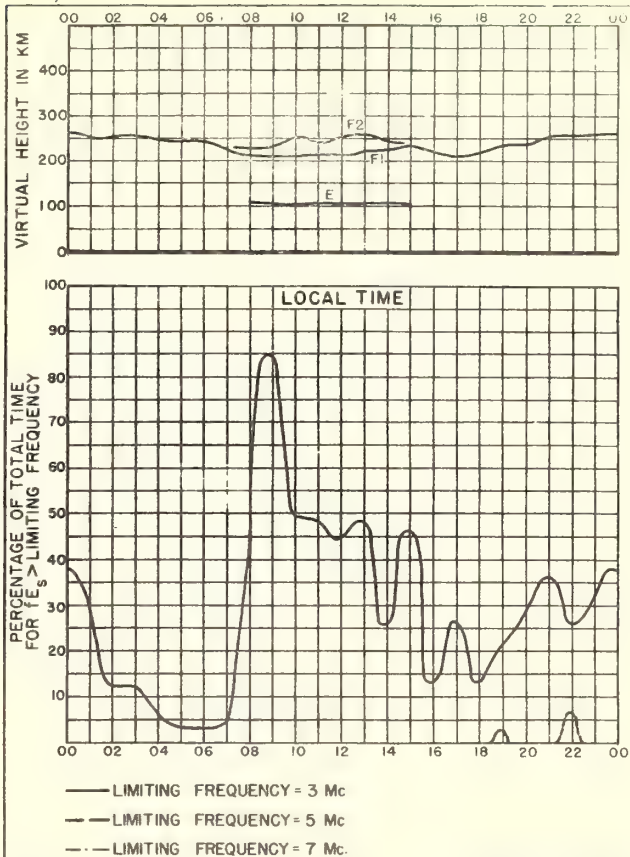


Fig. 6. SAN FRANCISCO, CALIFORNIA
NOVEMBER, 1944

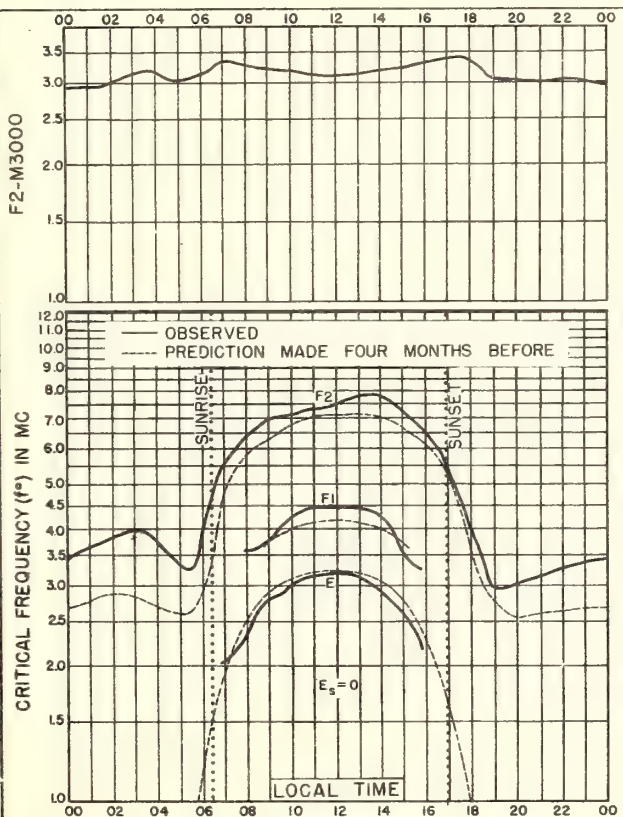


Fig. 7. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W
NOVEMBER, 1944

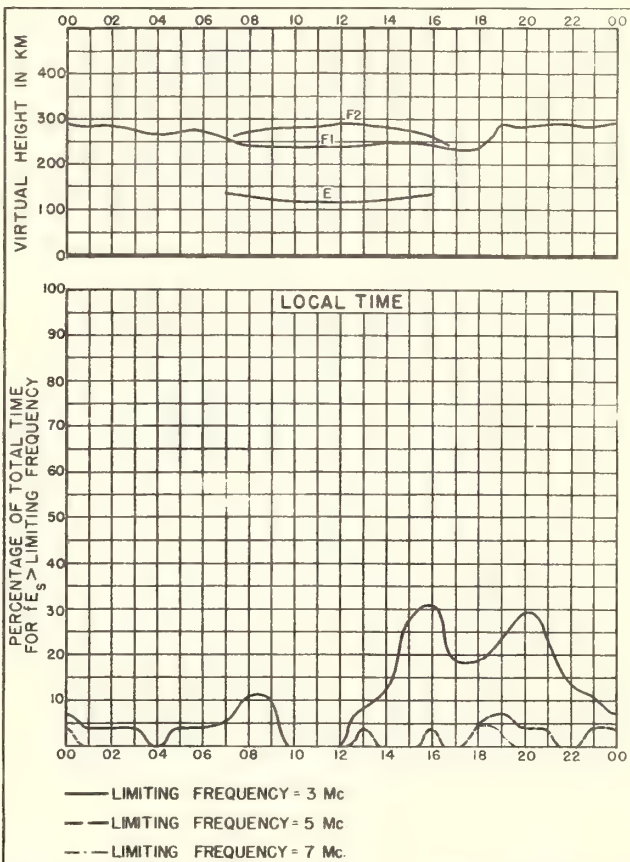


Fig. 8. BATON ROUGE, LOUISIANA
NOVEMBER, 1944

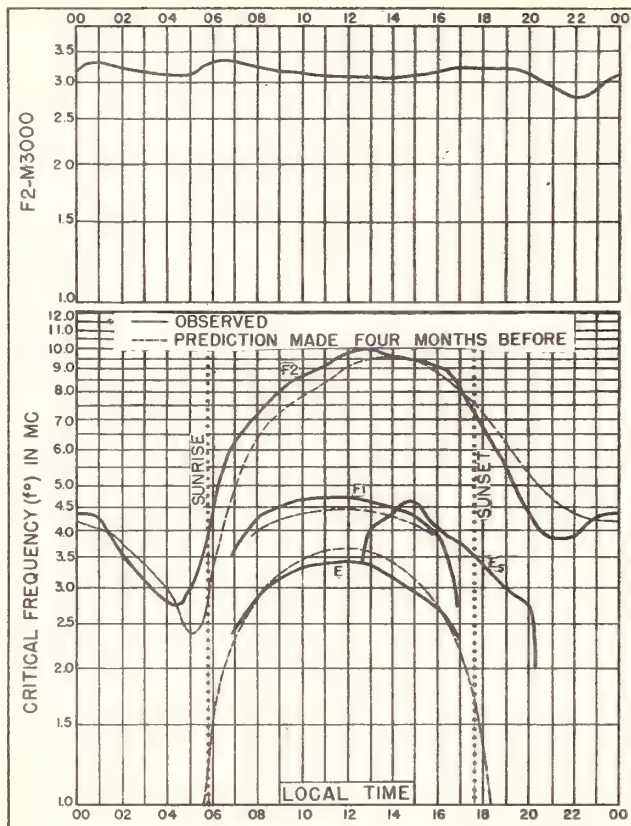


Fig.9. TRINIDAD, BRIT. WEST INDIES
10.6°N, 61.3°W
OCTOBER, 1944

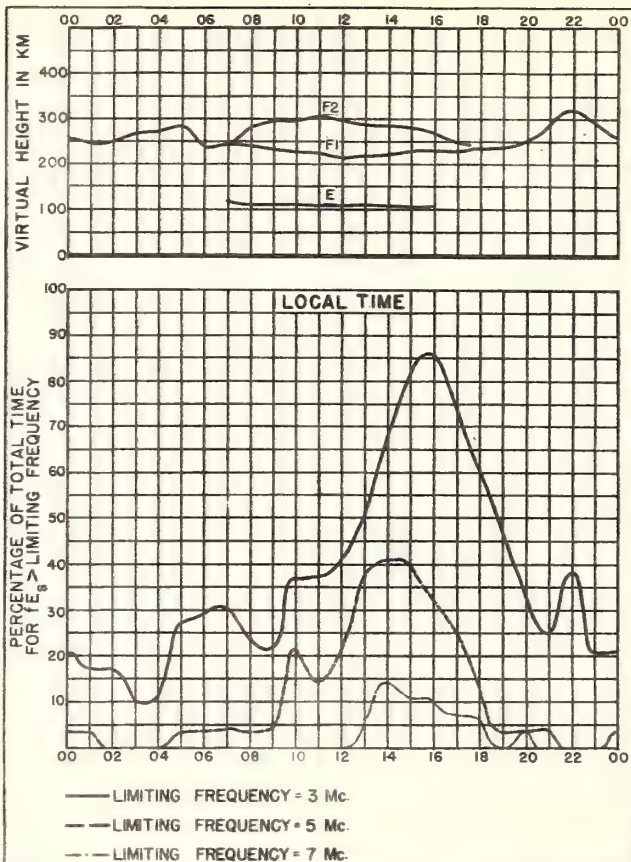


Fig.10. TRINIDAD, BRIT. WEST INDIES
OCTOBER, 1944

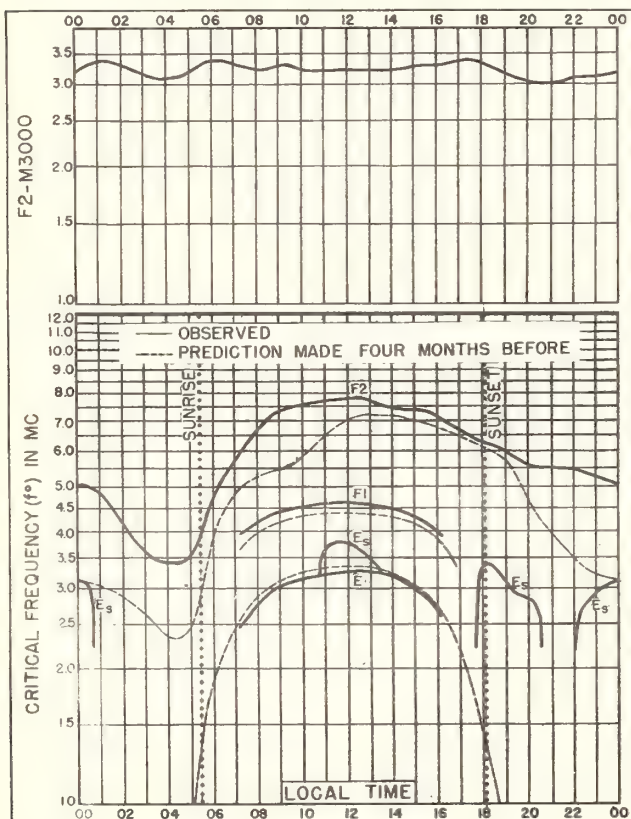


Fig.11. BRISBANE, Q., AUSTRALIA
27.5°S, 153.0°E
OCTOBER, 1944

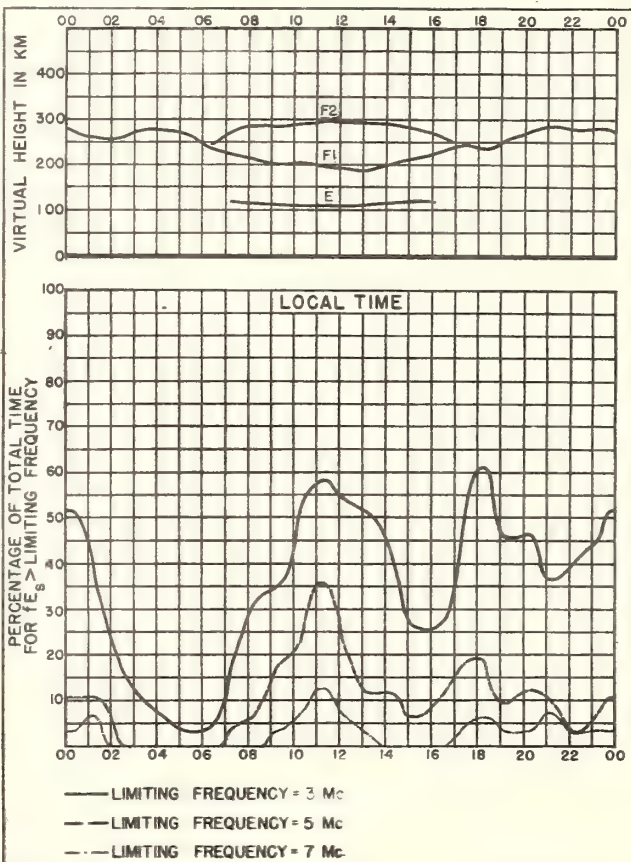
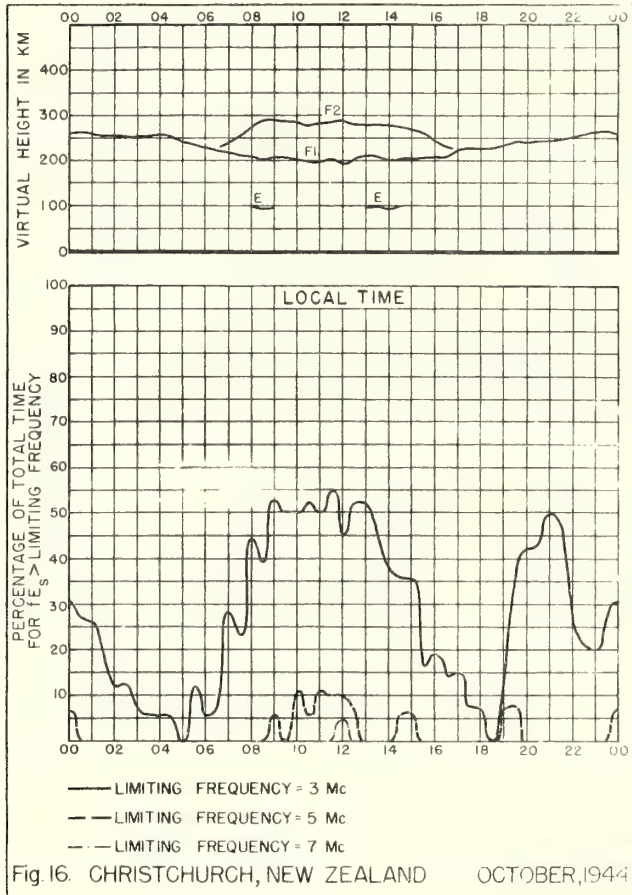
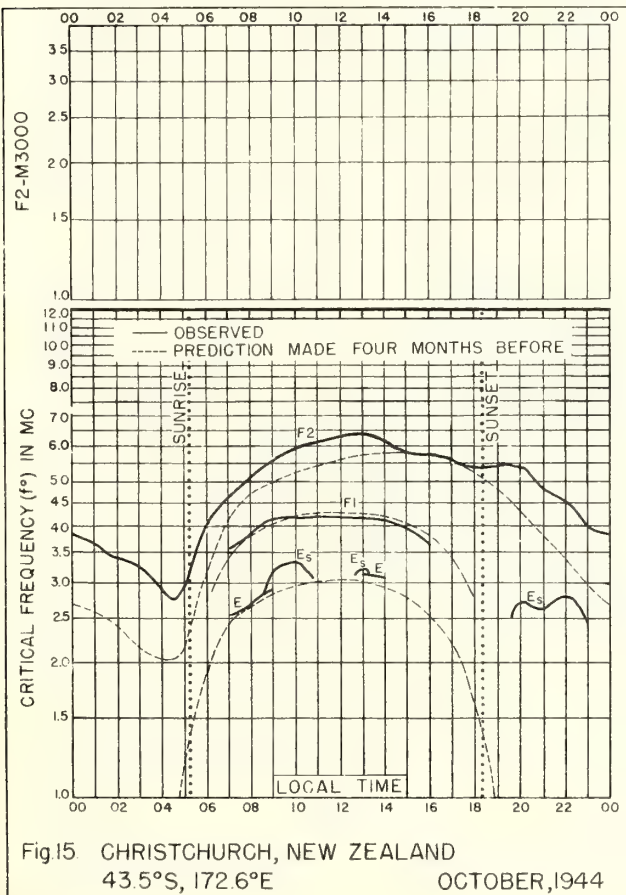
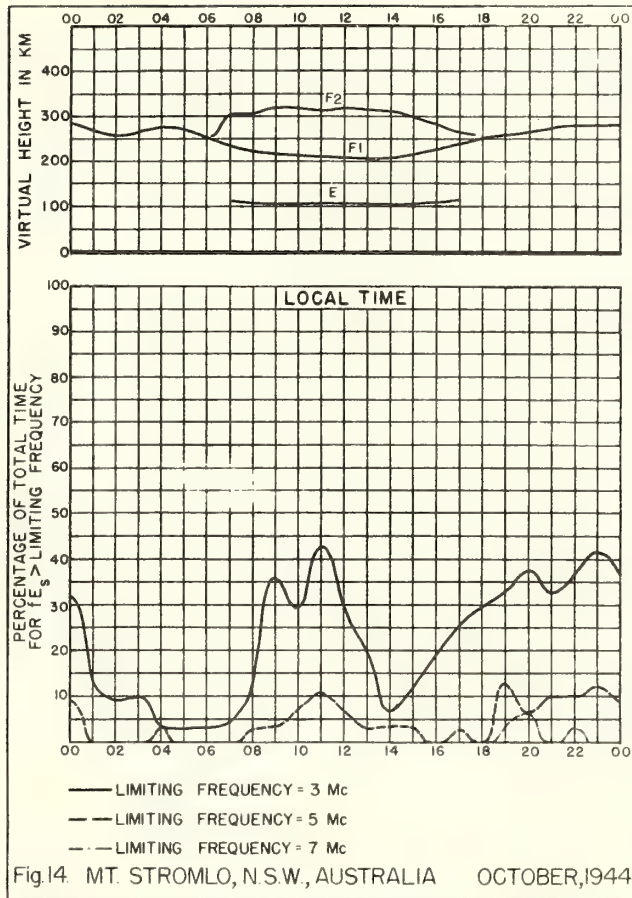
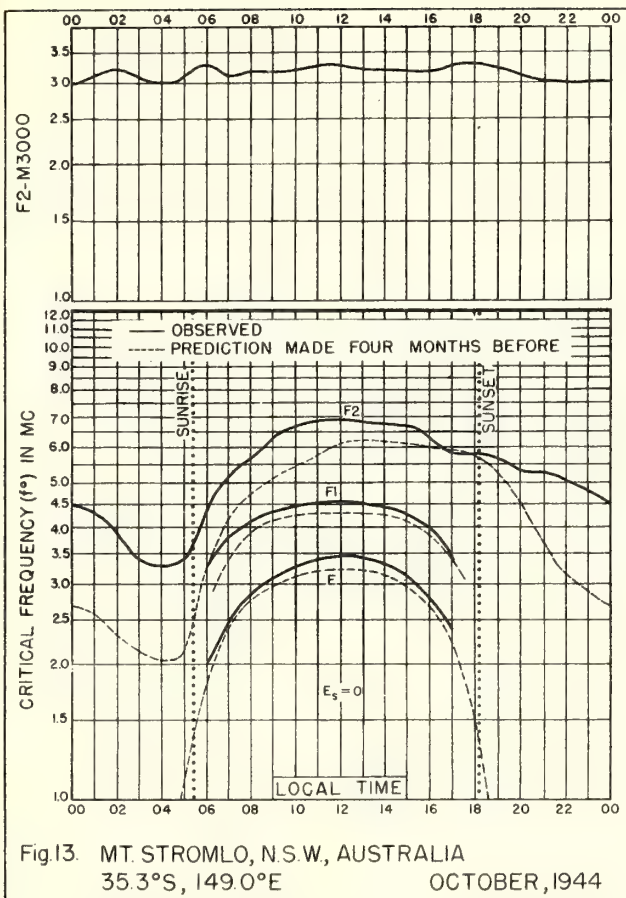


Fig.12. BRISBANE, Q., AUSTRALIA
OCTOBER, 1944



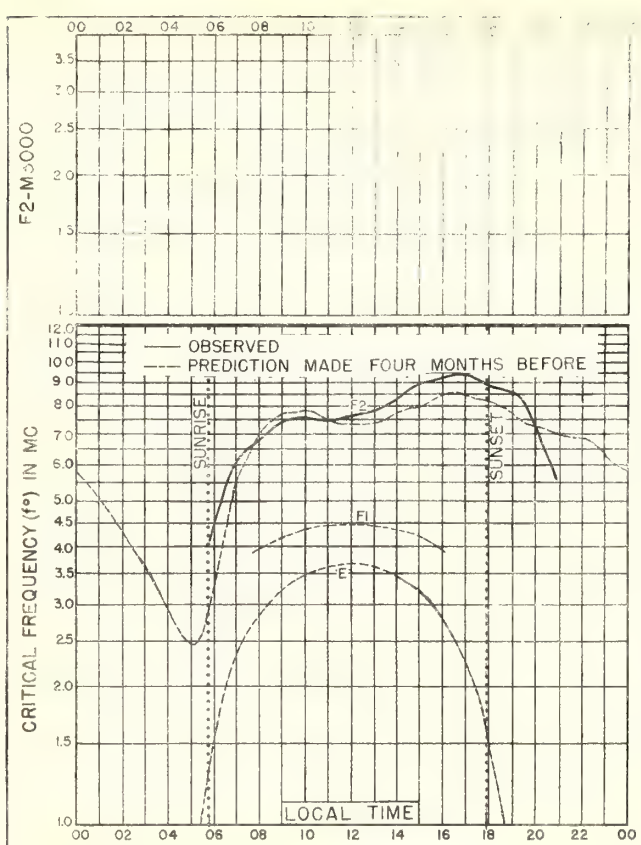


Fig.17. MADRAS, INDIA
80.2°E, 13.0°N

SEPTEMBER, 1944

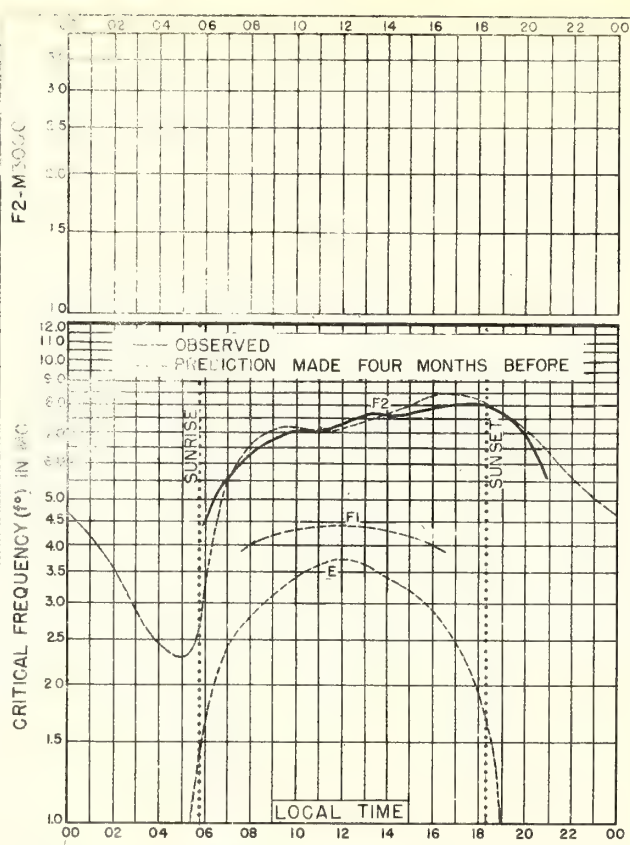


Fig.18. MADRAS, INDIA
80.2°E, 13.0°N

AUGUST, 1944

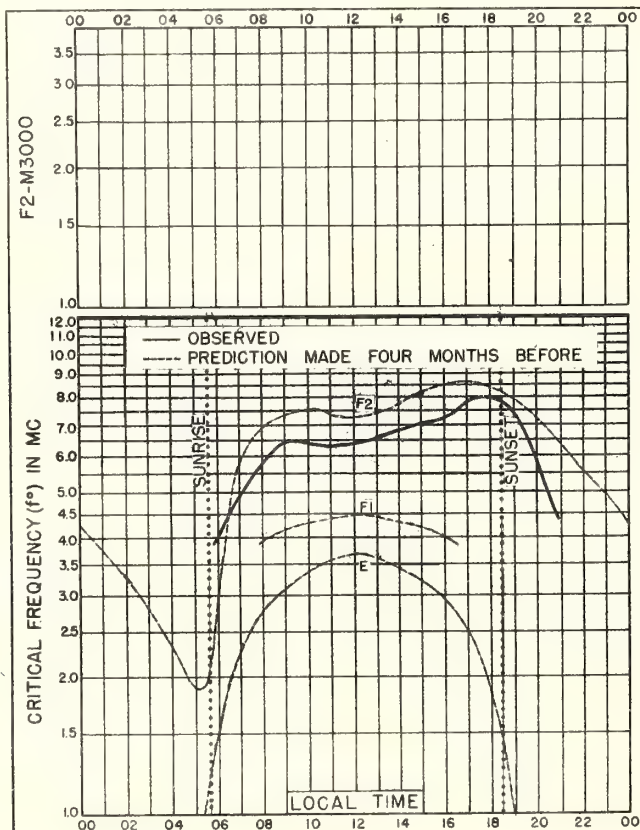


Fig.19. MADRAS, INDIA
80.2°E, 13.0°N

JULY, 1944

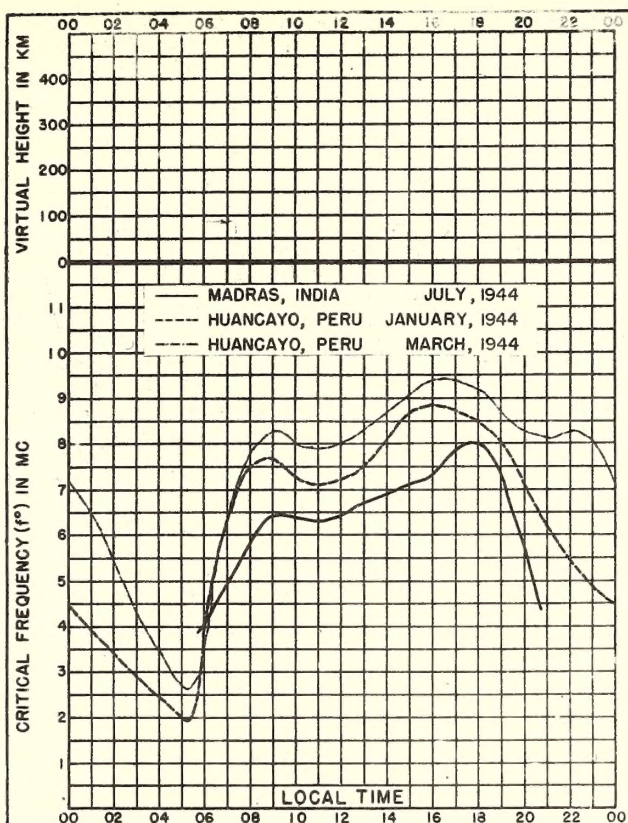


Fig. 20. COMPARISON OF f^oF_2 AT MADRAS, INDIA (13.0°N, 80.2°E) AND HUANCAYO, PERU (12.0°S, 75.3°W)

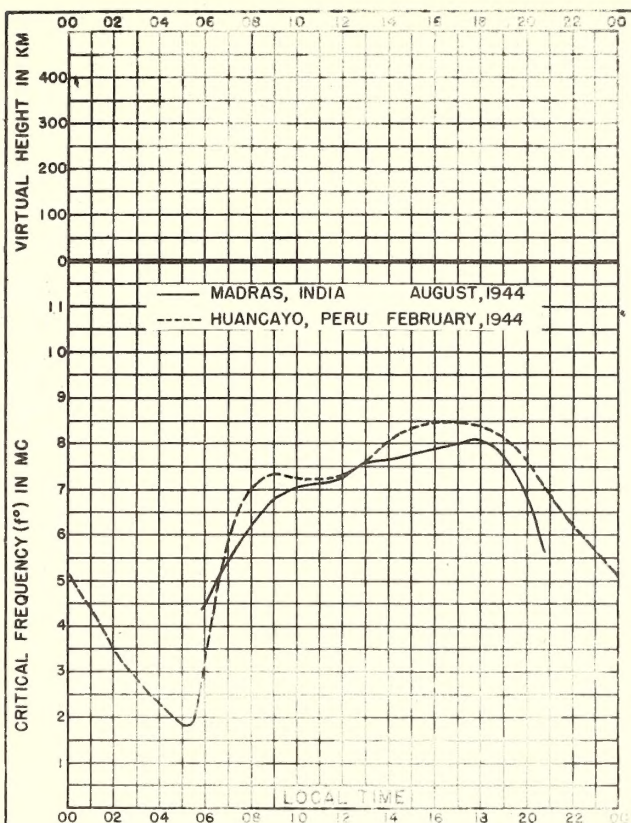


Fig. 21. COMPARISON OF f^oF_2 AT MADRAS, INDIA (13.0°N, 80.2°E) AND HUANCAYO, PERU (12.0°S, 75.3°W)

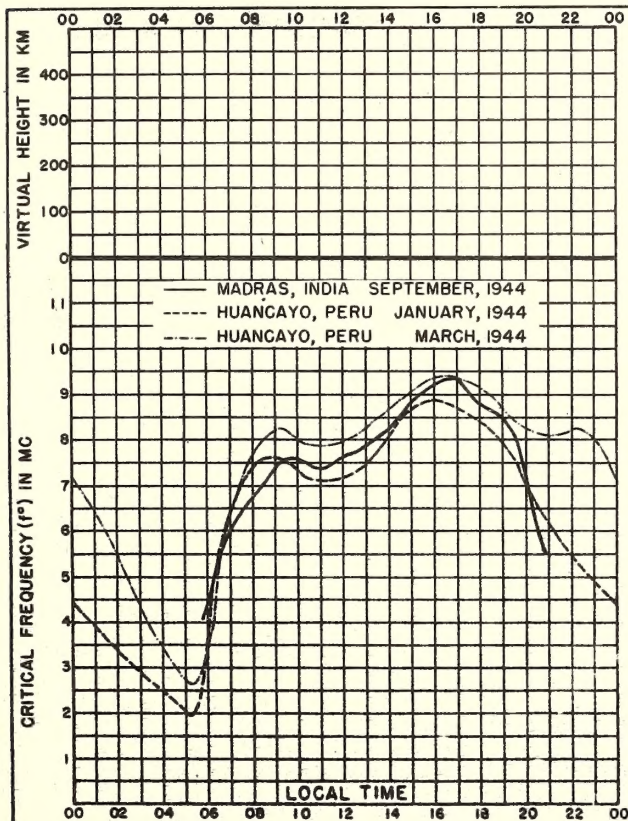


Fig. 22. COMPARISON OF f^oF_2 AT MADRAS, INDIA (13.0°N, 80.2°E) AND HUANCAYO, PERU (12.0°S, 75.3°W)

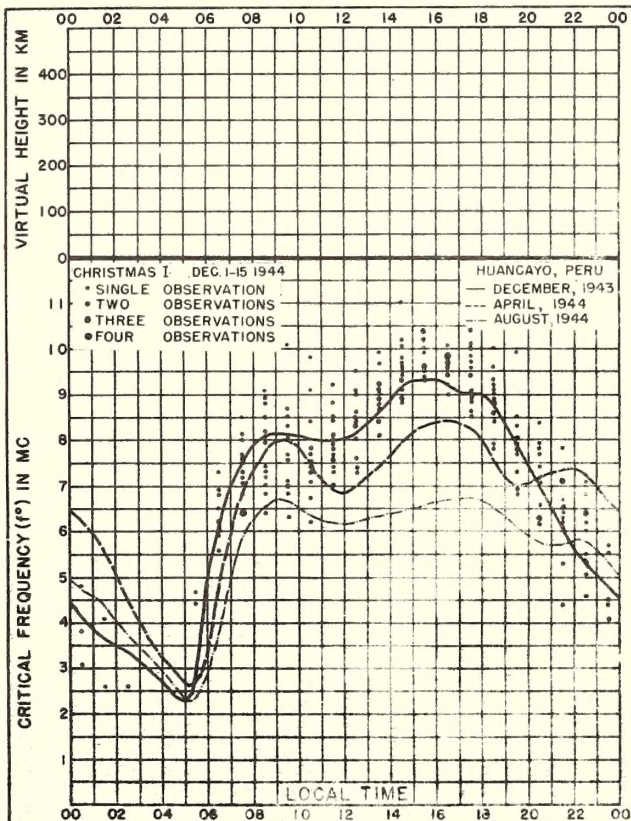


Fig. 23. COMPARISON OF f^oF_2 AT CHRISTMAS I (2.0°N, 157°W) AND HUANCAYO, PERU (12.0°S, 75.3°W)

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